

3-D Imaging Past & Present

January/February 2010
Volume 35, Number 4



A Publication of
National
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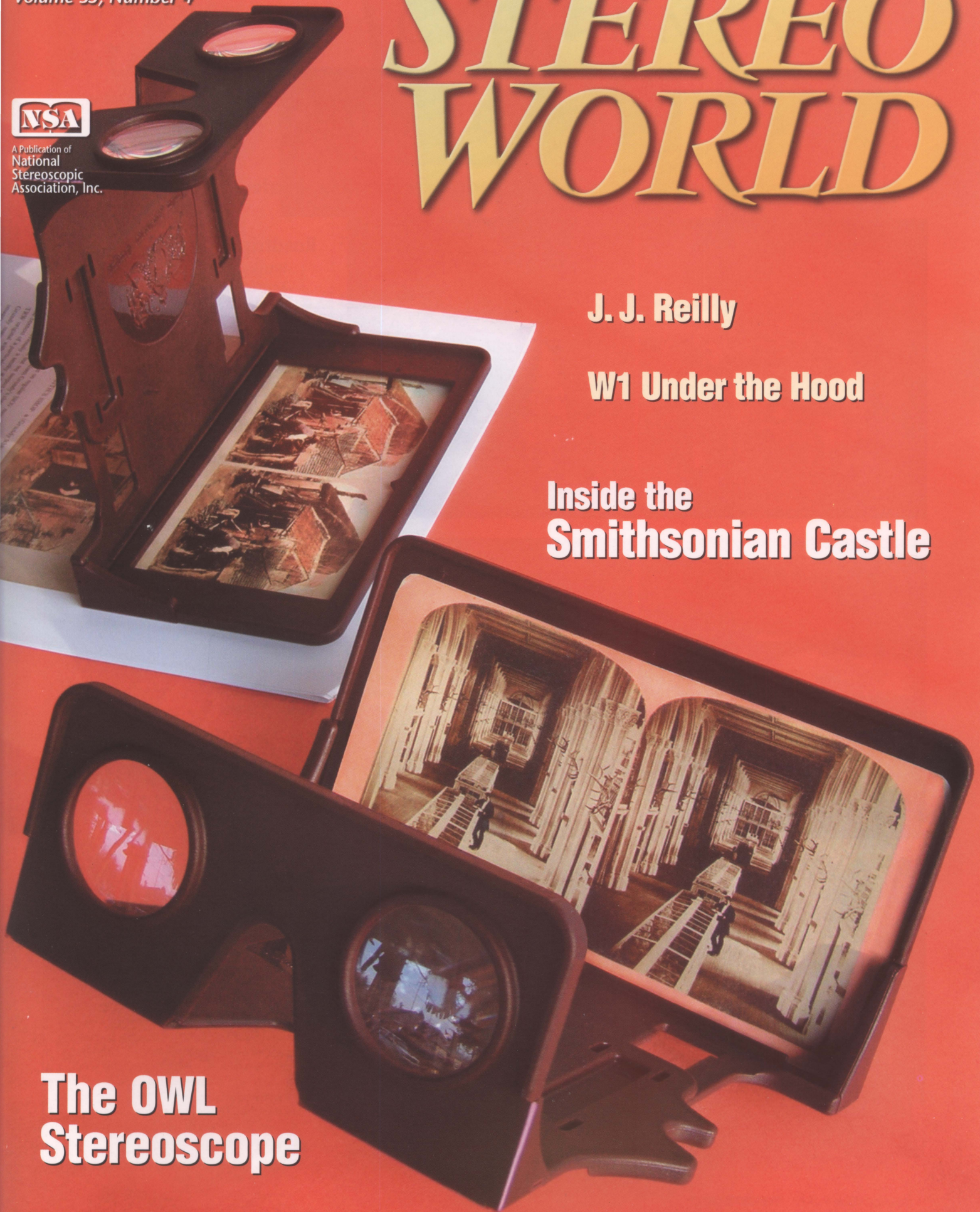
STEREO WORLD

J. J. Reilly

W1 Under the Hood

**Inside the
Smithsonian Castle**

**The OWL
Stereoscope**



'50s Flavored Finds

A taste of the late '40s through the early '60s found in amateur stereo slides

by Mark Willke

Roadtrips with the Family

Thanks to Mr. John Baker of Morrow, Ohio, SSA #827, who made and submitted these three views. He and his family did quite a bit of travelling over the years, and fortunately he was able to capture their journeys in stereo.

The first view, labeled "7:30 AM, Home, Start of Trip, August 9, 1958", shows John, his wife and three children with a loaded trunk, ready to hit the road.

The next shot, taken a few years later, is labeled "Christmas Day, 1962, ...Palm Beach, Fla."

The final view, from July 1966, was made in Sequoia National Park in California. I enjoyed seeing the tiny trailer, which doesn't appear to expand upwards and must have barely had room to crawl into!

John reports that he has recently enjoyed revisiting some of his favorite vacation destinations, this time with his grandchildren. 📷



This column combines a love of stereo photography with a fondness for 1950s-era styling, design and decor by sharing amateur stereo slides shot in the "golden age" of the Stereo Realist—the late 1940s through the early 1960s. From clothing and hairstyles to home decor to modes of transportation, these frozen moments of time show what things were really like in the middle of the twentieth century.

If you've found a classic '50s-era image that you would like to share through this column, please send the actual slide or a high-resolution side-by-side scan as a jpeg, tiff or photoshop file to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206. You can also email the digital file to strwld@teleport.com. If the subject, date, location, photographer or other details about your image are known, please include that information as well.

As space allows, we will select a couple of images to reproduce in each issue. This is not a contest—just a place to share and enjoy. Slides will be returned within 6 to 14 weeks, and while we'll treat your slide as carefully as our own, Stereo World and the NSA assume no responsibility for its safety.

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e-mail: strwld@teleport.com

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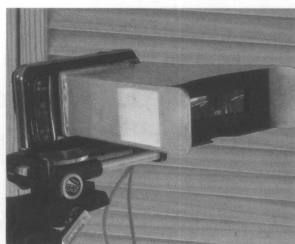
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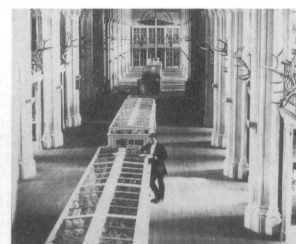
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Interior Views of the Smithsonian Institution

*by Richard Stamm, Curator, Smithsonian Castle Collection
with contributions by Paula Fleming*

Front Cover:

An OWL stereoscope holds an 1869 Bell & Brother view, "The Corridor of the Smithsonian Institution" from our feature by Richard Stamm and Paula Fleming, "The Castle Stereos, Interior Views of the Smithsonian Institution." At the rear, an OWL performs its book viewing function centered over a T.R. Williams view in A Village Lost and Found by Brian May and Elena Vidal from the article "Owl Stretching Time?" by John Dennis.

Back Cover:

J.J. Reilly, / YOSEMITE VALLEY, CAL./ Photographic Views/ OF AMERICAN SCENERY. No. 565, "Vernal and Nevada Falls, from Glacier Points, Yo Semite Valley, Cal." From our feature "John James Reilly, New Chronology, New Publishers of Reilly's Stereographs, New Bibliography, New Old and New Series Views" Final in A Series by Paul Hickman.

The National Stereoscopic Association is a non-profit organization whose goals are: to promote research, collection and use of vintage and contemporary stereoviews, stereo cameras and equipment, and related materials; to promote the practice of stereo photography; to encourage the use of stereoscopy in the fields of visual arts and technology; to foster the appreciation of the stereograph as a visual historical record.

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Annual membership dues: \$32 third class US, \$44 first class US, \$44 all international memberships. Annual memberships include six issues of *Stereo World*, a plastic lorgnette viewer, and a membership directory.
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EDITOR'S VIEW

Comments and Observations

John Dennis

Missing the Movies

With the recent releases of more major 3-D films, the problem of reviewing or even providing advance coverage in a bimonthly magazine again becomes evident and a bit frustrating. *Avatar*, for instance, was released just as this issue was nearly complete. And as with nearly all of the biggest 3-D films of recent years, studios seemed loath to provide stereo frame pairs for advance articles even though flat publicity images were plastered all over the internet, magazines, the sides of busses, etc.

Ray Zone will cover *Avatar* in our next issue, including comparisons of all the various 3-D projection formats in which it was shown in the Los Angeles area. That review may in fact be timely in the case of *Avatar*, since it seems not unlikely that it will earn at least a few assorted awards and possibly run again in many theaters. The drawback there is the chance it could force some other film off 3-D screens at that point. Increasing numbers of 3-D screens will help in general, but the 3-D vs

2-D competition will only reach a slightly level state when enough of the 2nd run theaters in major cities install 3-D screens, giving 3-D films a second life with flat films in theaters where the pizza and beer help draw neighborhood patrons.

W1

Bob Pfeiff's critical look at the Fujifilm Finepix Real 3D W1 in this issue takes a close look at its shortcomings that can certainly add up if one starts counting from somewhere beyond a point-and-shoot perspective. Many of these exist in even mid level digital cameras, which seem designed to make quick responses to different situations as difficult as possible. And like too many digital cameras, the W1 commits the inexcusable offense of providing not even a simple optical viewfinder for use in direct sun situations when the screen is useless. Bob's solution of a magnifying hood makes a rather satisfying mockery of the camera's membership in the "if it's not iPhone size, it's not cool" club.

The relative lack of promotion by Fujifilm for the W1 in the main-

stream media has many stereographers a bit nervous about the company's commitment. The impression of a trial balloon is easy to understand, and one wonders if Fujifilm executives were even happy to see the camera featured among *Time* magazine's Top 50 Inventions of 2009.

The fact remains that most users have a blast with their W1s, finding its limitations generally less frustrating than many of the complications generated by dual digital rigs despite their often superior raw image quality. Try turning off the flash in all but the darkest situations, try screwing a small handle into the tripod socket, try gluing a simple "Sports finder" to the top, and have fun! Fujifilm committed only one truly unforgivable bit of treachery by failing to make the FinePix MPO software compatible with Mac. For some, that may mean buying a used PC and setting it up in some dark basement corner as a stand-alone image processing machine. Worth it, but more annoying than some of the faults identified in Bob Pfeiff's article. 📷

National Stereoscopic Association



Huron/Sandusky, Ohio

LETTERS

Reader's Comments and Questions

Cross in Carmichael

Regarding the article on page 35 of the Sep/Oct 2009 issue of *Stereo World*. The very title is a contradiction. It says "don't be cross" yet advocates doing exactly that. It then says "relax into 3-D" which is the exact opposite of what it suggests!

When the eyes are relaxed, they are either parallel or slightly converged. This is normal when looking at distant objects and what happens in normal freevision. Hyperconvergence, as when looking cross-eyed, is unnatural, and only occurs when people are making faces or viewing backwards pairs.

I find it extremely irritating that so many cross-eyed assume that everyone is capable of cross-eyed freevision. Not everyone can do cross-eyed freevision and many

people, including myself, find trying to do so extremely painful.

The statement "no viewer required" should read "no viewer available" since viewers capable of working with large backwards pairs are nearly impossible to find. The cross-eyed viewers I've found, such as the one included with the Loreo 321 work only with very small pairs that could be easily freevisioned if they were presented normal rather than backwards orientation.

To view the pairs in that book I would have to either cut them out and put them in normal orientation or scan them into a computer and manipulate them with software. I have found that I can view normal pairs of any size by simply backing away from them so that only slight divergence is required. Divergence is not required for viewing the pairs printed in *Stereo World* or in publications such as the *Stereo Realist Manual*.

That is not to say that I have a problem with the backwards nature of JPS files, they are meant to be viewed with a viewer program so that the user can choose their own form of viewing rather

than having one forced on them.

Hopefully the time honored wisdom of presenting printed pairs in normal orientation so that everyone can enjoy them, either by simple natural freevision or with inexpensive easily obtained viewers will continue. The day *Stereo World* starts printing pairs backwards is the day I toss it out the window!

John Elson
Carmichael, CA

A new way to violate the stereo window! Be assured, the only images we print for crossviewing are those intended for such reproduction (such as illustrating the cover of the book in question) or to make a point about crossviewing itself. In the wider world of print, there's room for all sorts of formats and viewing techniques from over/under to parallel to L-R-L sets to anaglyphs to even mirror viewing. The real challenge may be in just keeping print media itself alive, so donating SWs to laundromats or waiting rooms beats the window heaven!

- Ed. 📷

If you have comments or questions for the editor concerning any stereo-related matter appearing (or missing) in the pages of *Stereo World*, please write to John Dennis, Stereo World Editorial Office, 5610 SE 71st Ave., Portland, OR 97206.

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GONE MADDD

by AARON WARNER
3-D by Ray Zone



"I ENJOY GOING TO THE TRADE FAIR DURING EACH CONVENTION, BUT ALL THIS ROOM HOPPING GIVES ME A HEADACHE!"



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John James Reilly

New Chronology,
New Publishers of
Reilly's Stereographs,
New Bibliography, New
Old and New Series Views

Final in a series by Paul Hickman

New Chronology

Circa 1865

Carte-de-visite portrait of a young woman of a new card type. Bottom of recto: "Photograph \$1.00 per dozen, and 4 large tintypes 50 cents, at the yellow car, Suspension Bridge, N.Y. by J.J. REILLY." Collection of Paul and Kathy Hickman, Jonesboro, Arkansas. Very early in Reilly's photographic career, he made tintypes at the yellow car, Suspension Bridge, New York.

Circa 1865-70

The verso bears large letterpress type in four lines in blue ink: "J.J. Reilly/ Photographer Suspension Bridge/ N.Y." The recto: albumen photograph measures 7"x9" of the Suspension Bridge at Niagara Falls, New York. Collection of Paul and Kathy Hickman, Jonesboro, Arkansas. This is the only known large format photograph by John James Reilly I have encountered.

1868 July 17

Carte-de-visite portrait of John Steven. Collection of Paul and Kathy Hickman, Jonesboro, Arkansas.

June 1870

Albert Delafield and E.J. Shipman taken in the Yosemite Valley. Collection of Paul and Kathy Hickman, Jonesboro, Arkansas.

New Publishers of Reilly's Stereographs

John Pitcher Spooner (1845-1917) alone worked at 171, 173 and 175 Main Street [address on cards], the corner of Center Street, Kidd's Block, Stockton, California, from 1872 to 1891. *Bishop's Stockton Directory for 1876-77*. Stockton: D.M. Bishop, September 1876, p. 180; *Pacific Coast Directory, for 1880-81*. San Francisco: L.M. Mc Kenney, 1880, 837; *Stockton City, San Joaquin, Stanislaus, Calaveras, Tuolumne and Contra Costa Counties, Directory, 1884-5*. San Francisco: L.M. Mc Kenney, October 1884, p. 218; *Mc Kenney's Pacific Coast Directory for 1886-7*. San Francisco: L.M. Mc Kenney, March 1886, p. 807; *Stockton City and San Joaquin Directory 1887-88*. San Francisco: California Publishing, 1887, p. 216; *Southern Pacific Coast Directory, for 1888-89*. San Francisco: Mc Kenney Directory Company, April 1888, p. 1191; *Mercantile Guide to the Cities and Suburbs of the United States of America: California Edition, 1891*. San Francisco: Mercantile Guide, April 14, 1890, p. 635; Paul Shafer, March 27, 1978.

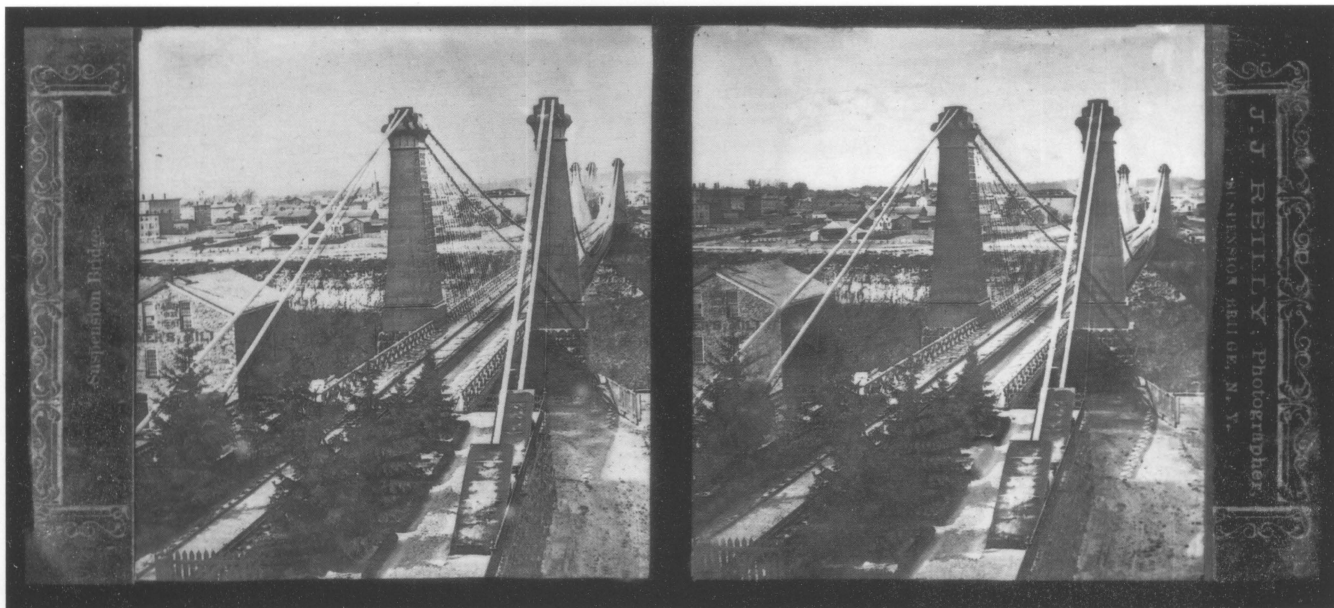
The partnership of Edwin J. Hayward (1838-) and Henry W. Muzzall (1844-) worked on the corner of State and Carillo Streets in the Town Clock Building, opposite the Occidental Hotel, in Santa Barbara, California, from 1874 to 1883. *California State Business Directory 1875-1876*. San Francisco: D.M. Bishop,

August 1, 1875, p. 352; *The Pacific Coast Business Directory for 1876-78*. San Francisco: Henry G. Langley, 1875, p. 480; *Business Directory of*

"Photograph \$1.00 per dozen, and 4 large tintypes 50 cents, at the yellow car, Suspension Bridge, N.Y. by J.J. REILLY." (bottom of recto of a new card type). No number (portrait of a young woman). circa 1865. Carte-de-visite. Albumen print. White card. Paul and Kathy Hickman, Jonesboro, Arkansas. Very early in Reilly's photographic career, he made tintypes at the yellow car, Suspension Bridge, New York.



Photographs \$1.00 per dozen, and 4 large tintypes 50 cents, at the yellow car, Suspension Bridge, N. Y. by J. J. REILLY.



the Pacific States and Territories for 1878. San Francisco: L.M. Mc Kenney, 1878, p. 137; Disturnell's Business Directory and Gazeeter of the West Coast of North America. San Francisco: W.C. Disturnell, 1882, p. 111; Mc Kenney's Pacific Coast and California State Directory for 1883-84. San Francisco: L.M. Mc Kenney, December 1882, p. 847; Carl Mautz, *Biographies of Western*

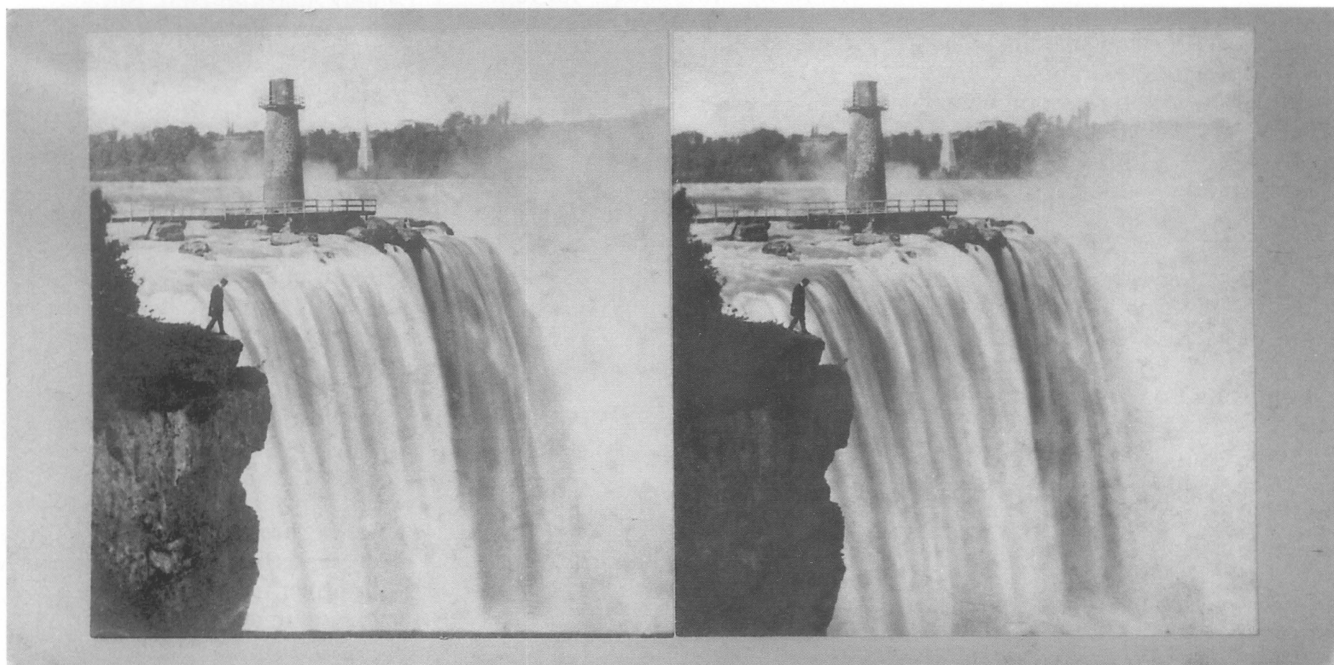
"J.J. REILLY, Photographer, /SUSPENSION BRIDGE, N.Y." (right side of also new card type). No number. *Suspension Bridge* (left side). circa 1865. Stereograph. Glass. Paul and Kathy Hickman, Jonesboro, Arkansas. Also very early in his photographic career, Reilly made this glass stereograph view of Suspension Bridge by Roebling. This is the only known glass stereograph by Reilly.

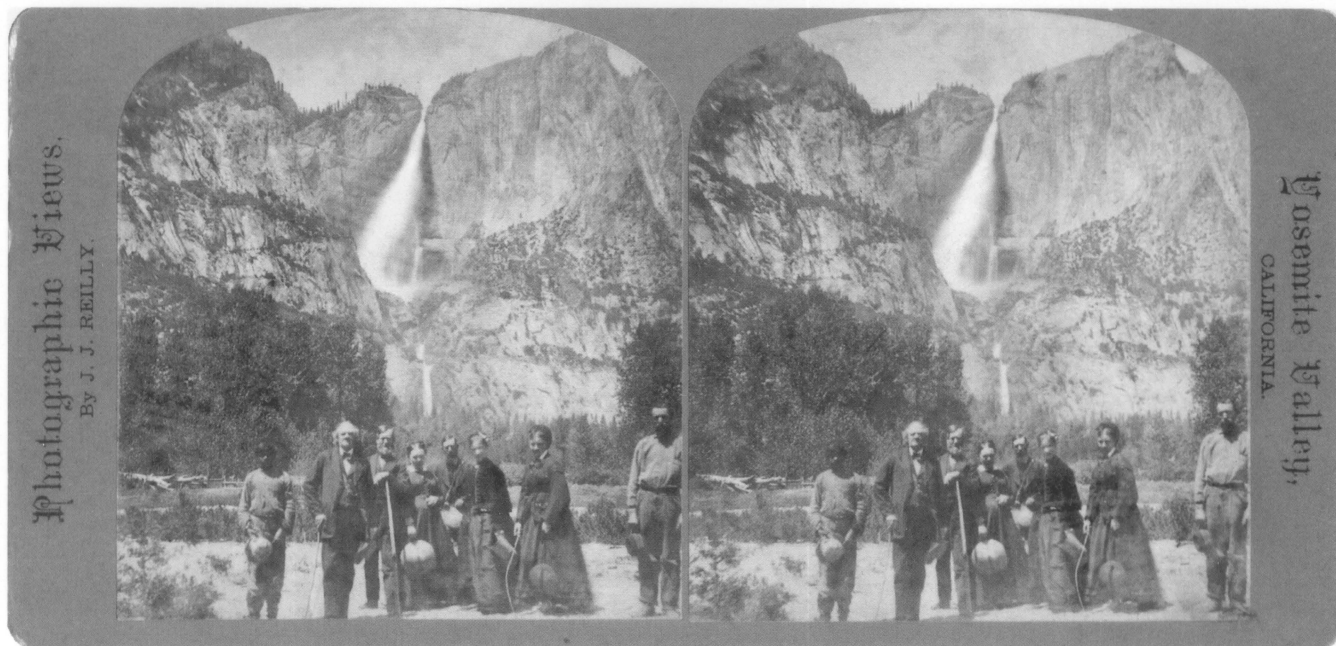
Photographs: A Reference Guide to Photographers Working in the 19th Century American West (Nevada City, California: Carl Mautz Publishing, 1997), Hayward & Muzzall. George E. Curtis (1830-1910) and Reilly worked together in Nia-

gara Falls, New York, from 1868 to 1870. Curtis failed to ever credit Reilly in his old series No.7 and new series No. 309 and No. 369 (Curtis No.195) or old series No. 94 and new series No. 367 (Curtis No. 23). Mark A. DiLaura, "Niagara Falls" *Stereo World* 17 (January/February 1991): 4-18.

Leon and J. Levy ran his company in Paris, France, in the mid-1870s. *Classified Catalogue of Magic Lantern Slides and Stereographs for the Stereoscope, Manufactured by*

"J.J. REILLY, / PHOTOGRAPHER, / And Manufacturer of / Stereoscope Views, / Glass & Paper, Wholesale & Retail, / Suspension Bridge, N.Y. / Scenery of / Niagara Falls & Suspension Bridge." (verso). No number. Tower from Goat Island [MS, verso]. Stereograph. Albumen prints. Yellow card. Paul and Kathy Hickman, Jonesboro, Arkansas. Also published by Reilly in his old series as No. 70 and as No. 234. Terrapin Tower was erected in 1833; it remained there, a well-known landmark, until it was condemned as unsafe and toppled in 1873.





Messrs. J. Levy & Co., Paris, (Late Ferrier & Soulier). Philadelphia: translated and published by Benerman & Wilson, 1875, p. 84, numbers 113-52.

W.M. Chase (1818/19-1905/08) worked in Baltimore, Maryland, from the 1870s to 1890s.

Truman Ward Ingersoll (1862-1922) worked at 52 East Sixth Street (address on cards) in Saint Paul, Minnesota, from 1895 to 1905. *Directory of Minnesota Photographers*, Minnesota Historical Society, Saint Paul.

In the 1890s, William Herman Rau (1855-1920) was published by Griffith & Griffith, and in the late 1890s to 1905, he published by himself out of Philadelphia, Pennsylvania, and Lawrence, Kansas, as the Universal View Company. B.W. Berry (Universal Stereoscopic View) ran his company at 2210 State Street, Chicago, Illinois, Pomona, California and Melbourne, Australia, from the late 1890s until about 1915.

The Whiting View [Richard Ross Whiting (1872-1944) and his brother Herbert (1878-circa 1943/44)] ran his company in Cincinnati, Ohio, from April 1900 to 1908. John Waldsmith, "The Whiting Brothers of Cincinnati," *Stereo World* 15 (November/December 1988):28-37.

"Photographic Views, / By J.J. REILLY, / Yosemite Valley, CALIFORNIA" (margins of recto). No number [old series #450]. "Yosemite Falls and Barnum's party" [MS, verso]. Stereograph. Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas. In 1870, during the first week of June, Phineas T. Barnum and his excursion party toured the Yosemite Valley, where Reilly photographed the great American showman and his entourage. He exposed several variant negatives, keeping one for himself and selling the other to an Eastern publisher. Here is his first western United States card imprint, made in 1870. To the best of my knowledge, it was not given a number until 1873 (Reilly & Ormsby, No.450, the New York Public Library, New York, New York, and the late Peter E. Palmquist, Arcata, California). He sold the other to C. W. Woodward, later Union View Company in Rochester, New York. In each version, the Barnum party is flanked by a rustic figure: presumably a guide, and perhaps the Yosemite Indian boy who joined Barnum's circus nine months later. (See Emil F. Ernst, "There's a Sucker Born Every Minute!", *Yosemite Natures Notes* 34 (May1955):62-63.

New Bibliography

1989

Peter E. Palmquist appropriated "The Reilly Chronology" for himself in *J.J. Reilly: A Stereographic Odyssey, 1838-1894*, edited by Peter E. Palmquist (Yuba City, California: Community Memorial Museum, 1989), pp. 9-24

1991

January/February: Paragraph compares and contrasts stereograph views of *Table Rock* of Curtis (#20) and Reilly (#229). Mark A. DiLaura, "Niagara Falls, Part 3," *Stereo World* 17 (January/February 1991):6.

1994

Crain, Jim. *California in Depth: A Stereographic History*. San Francisco: Chronicle Books, 1994, pp. 15-16, 18, 61-62, 64, 70, 89 and 93. Eight Reilly stereograph views including Woodward #556 and Reilly new series #104, #223 and #381.

1997

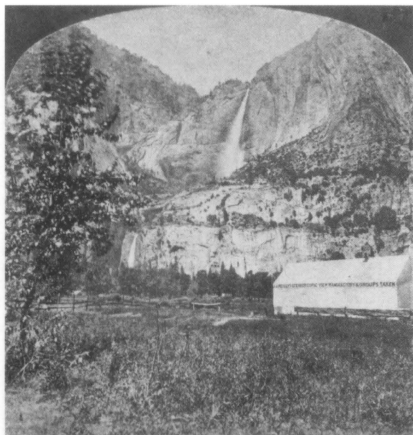
Mautz, Carl. *Biographies of Western Photographers: A Reference Guide to Photographers Working in the 19th Century American West*. Nevada City, California: Carl Mautz Publishing, 1997, pp.133, 156.

2001

Palmquist, Peter E. "The Pioneers: Landscape and Studio." *Capturing Light: Masterpieces of California Photography, 1850 to the Present*. Oakland, California: Oakland Museum of California in association with New York and London: W. W. Norton & Company, 2001, pp. 15-16, 347.

Catalog, Old Series

One lithograph of Niagara Falls, one view of Salt Lake City, eight views of Yosemite Valley, one view of the Big Tree and one view of the High Sierras are followed by Reilly's number from his other series for the same negative. On thirty-one occasions, the Catalog entry is



"J.J. Reilly, / YOSEMITE VALLEY, CAL. / Photographic Views / OF AMERICAN SCENERY." (margins of recto). No 510. *Yosemite Falls, from Hutching's Bridge, Yo Semite Valley Cal.* (bottom of recto). Stereograph. Albumen prints. Orange and lavender cards. Paul and Kathy Hickman, Jonesboro, Arkansas. Also published by J.G. Parks. By the 1st of July, 1870, Reilly had engaged a carpenter to build his balloon-frame and canvas picture gallery. ("Artist Gallery in the Yo Semite Valley," Mariposa Free Press, 1 July 1870, p. 3, col. 1.) By September 9th the photographer was already hard at work, sun-printing beneath the Royal Arches. ([James H. Lawrence], "Yo Semite Sketches," Mariposa Free Press, 9 September 1870, p. 2, col. 2.) "Horseshoe-Bill" was "a carpenter as well as a guide" who displayed an unexpected talent for building and stretching "frames and canvas" for "Mr. Egremont" in Lady Yelverton's "Tale of the Yo-Semite." (Maria Therese Yelverton Longworth, *Zanita: A Tale of the Yo-Semite* (New York: Hurd & Houghton, 1872; Cambridge, Massachusetts: Riverside Press, 1872, pp 206, 273.) In real life, "Horseshoe-Bill" was Dan Folsom, the local guide who built a "Stereoscopic View Manufactory" for Reilly. ("Artist Gallery in the Yo Semite Valley," p. 3, col. 1.) Reilly's "Stereoscopic View Manufactory" was located on the north side of the upper side of the Valley. The direction his camera was pointed to make the exposures is documented here and Hickman and Palmquist,

"Niagara Falls" Stereo World 11 (November/December 1984): front cover can be determined from their vantage points and their backgrounds. (For a technical discussion of the interrelated variables (subject, azimuth, and vantage point), see Mark Klett, "Re-Photographing Nineteenth-Century Landscapes," in *Second View: The Re-Photographic Survey Project* (Albuquerque: University of New Mexico Press, 1984), pp. 11-44. These intersecting lines of sight—one looking northwest, the other northeast—make it possible for a photographic archaeologist to reoccupy the site of his vanished picture gallery.

cross-listed to the name of at least one other photographer, firm or

anonymous imprint. The Catalog includes ninety-three examples of

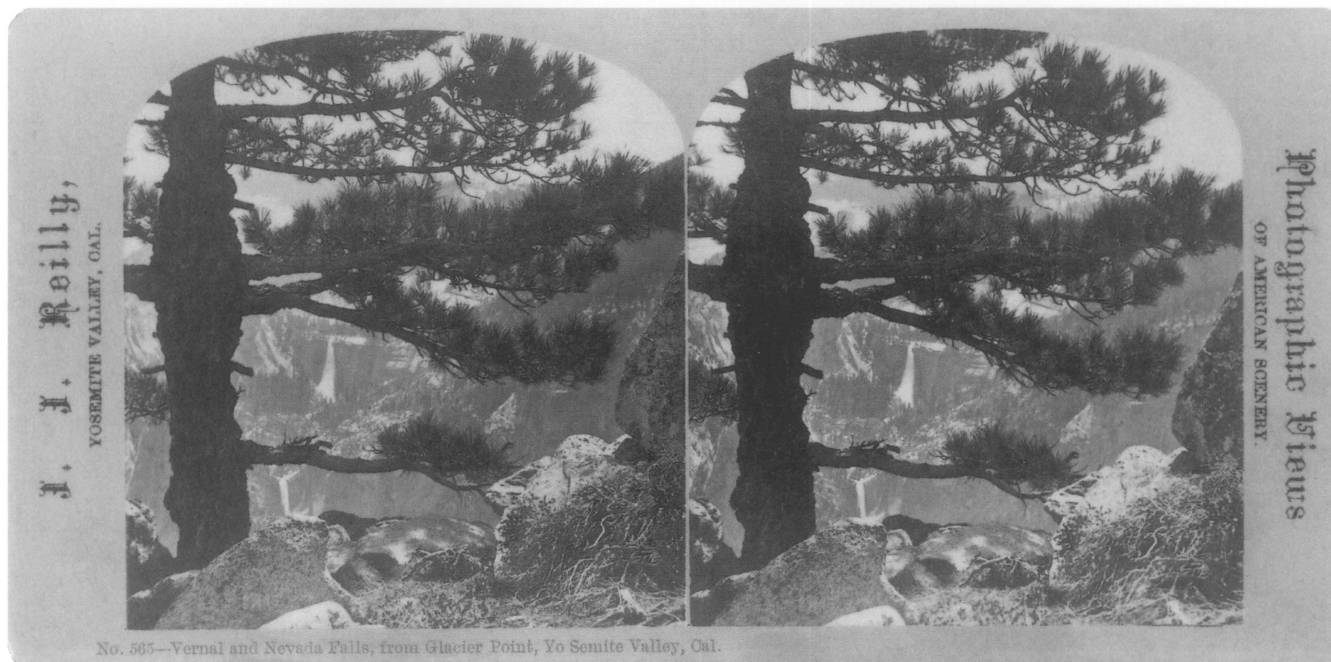
photographs on the imprints of another publisher of a duplicate or copy negative.

In stereographs of Niagara Falls, J.J. Reilly of Suspension Bridge, New York, and J.J. Reilly and J.P. Spooner of Stockton, California, are both printing from the same negatives.

Contributions to the check list were provided by Robert S. Batt of South Portland, Maine, by Bart Conchar of Harpers Ferry, West Virginia, by Carol Johnson of the Library of Congress, by Jeff Kraus of New Paltz, New York, by Robert A. Schreiber of Memphis, Tennessee, by Robert W. Smith of Venice, California and by Arthur

"J. PITCHER SPOONER, / PORTRAITS and LANDSCAPES, / 171-73-75 MAIN STREET, / STOCKTON." (margins of recto). "Lens, accordion bellows and tripod with J. Pitcher Spooner, STOCKTON, CAL. across the back of the camera. / J. Pitcher Spooner, / Stockton, / Cal. / Photographer [sic]." (verso). Unnumbered. *Vernal Fall - 336 ft.* (MS, top of recto). Stereograph. Albumen prints. Orange and lavender cards. Paul and Kathy Hickman, Jonesboro, Arkansas. Also published by J.J. Reilly and J.P. Spooner as No. 451 (Hickman and Palmquist, "Yosemite," Stereo World 11 January/February 1985: 15), by G. H. Aldrich & Company as No. 868, by the Littleton View Company as No. 868 and by J.G. Parks. After the 1871 season, Wilson commented that Reilly had "improved his work greatly since he left Niagara." In his stereograph of Vernal Fall, only the prismatic colors of its mists are lacking. The armchair traveler can almost sense the noise and the motion of the Merced as it descends the final step of the giant staircase between the Little Yosemite and Yosemite valleys. Reilly subscribed to the Philadelphia Photographer, which printed excerpts from Ruskin's *Modern Painters* on a regular basis, far more often than it quoted from any other critical source. The Stockton photographer may therefore have read and accepted some of Ruskin's positions. The English critic understood water as a process of natural history, as an expression of how far it had come, of how it had flowed before we see it.





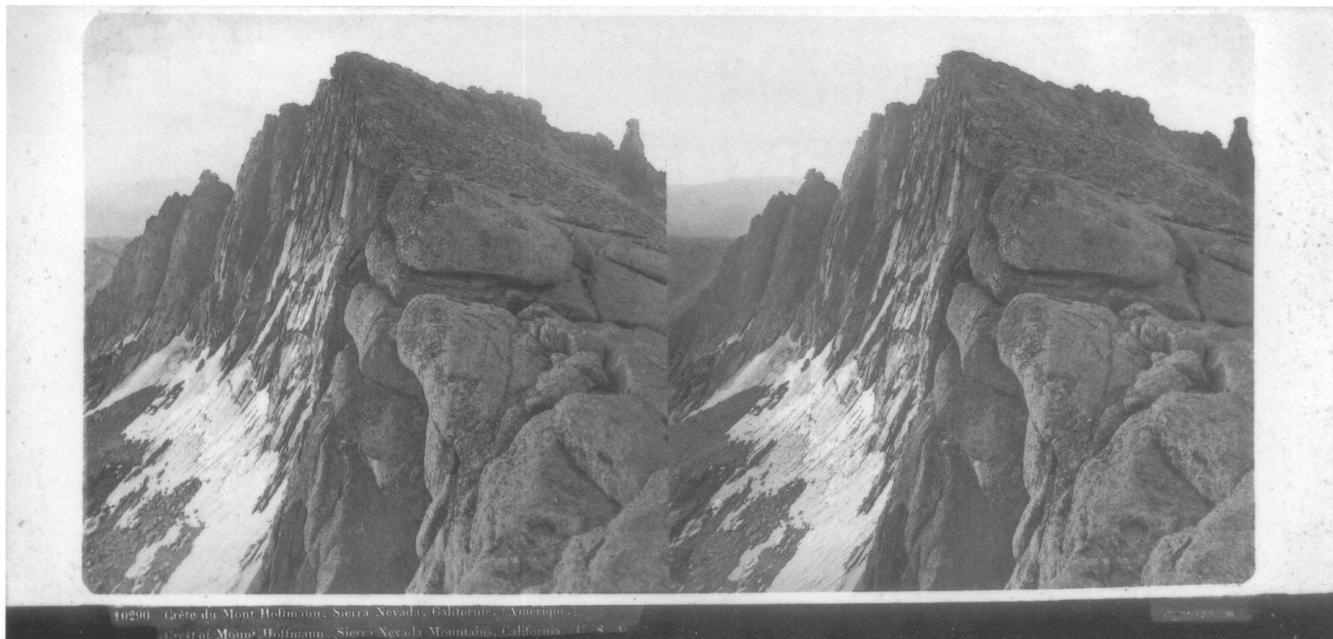
Weisenburger of Chester, Connecticut.

New, Old Series Views (1867-75)

5. from [two-doubled] Bridge.
7. Also published by Reilly in his new series as No. 369.
30. The Fishing Boat by Moonlight, Niagara [stereograph view].
39. Terrapin Tower and Horse Shoe Fall from Goat Island.
40. From below, with Rocks and Small Trees, [Scotland]. "Scotch Scenery," verso.
63. Terrapin Tower, Inst., Niagara.
90. Prospect Point, Winter, Niagara.
159. Catskill Falls [stereograph view].
199. Central Park Lake, New York City [stereograph view].
278. The Road to Table Rock, Niagara.
339. The Whirlpool, Niagara.
363. Horse Shoe Falls, from Canada, Niagara
391. Also published by Reilly in his new series as No. 186.
399. Salt Lake City, Utah (Reilly & Spooner).
401. High Rock Spring and Bottling House, Saratoga Spring, N. Y.
401. Also published on "The Pacific Coast/ West from Omaha" imprint as No. 17.
407. Also published by Richard Behrendt as No. 542.
409. Also published (Reilly & Spooner) by G.H. Aldrich and Company as No. 864.
413. Also published by Reilly in his new series as No. 333.
413. Also published (Reilly & Spooner) on the "The Pacific Coast/ West from Omaha" imprint as No. 41.
414. The Mother of the Forest, 327 feet high, Circum. 78 feet, Cal. Also published by Reilly in his old series as No. 446, on the "American Scenery/Tourist Series" imprints as No. 59, on the "American Views/Standard Series" imprint, by the Atlas View Company, by C. F. Copeland, by James Cremer, by

"J.J. Reilly, / YOSEMITE VALLEY, CAL. / Photographic Views / OF AMERICAN SCENERY." No. 565. Vernal and Nevada Falls, from Glacier Points, Yo Semite Valley, Cal. Stereograph. Albumen prints. Yellow and tan cards. Paul and Kathy Hickman, Jonesboro, Arkansas. Pencil on verso: "Snow [Hotel], July 5, 1876".

- Kawin and Company as No. 113, on "The Pacific Coast/West from Omaha" imprint as No. 8 and by Universal View Company as No. 58.
417. Also published on the "American Views" imprint. Also variant negative was published by Clark, Lake and Company.
417. Also published (Reilly & Spooner) on the "American Views/ Standard Series" imprint and on "The Pacific Coast/ West from Omaha" imprint as No. 13.
419. Also published on the "American Scenery" imprint, on the "American Views" imprints, by Elmer and Tenney and by Lovejoy and Foster. Also variant negative (Reilly & Spooner) that was also published by G.H. Aldrich and Company as No. 858 and by Littleton View Company as No. 858.
425. Also published on the "American Scenery/Stereoscopic Views" imprint.
428. Also published by J.G. Parks as No. 951.
430. Also published on "The Pacific Coast/ West from Omaha" imprint as No. 14.
431. Also published by Reilly in his old series as No. 499, by Reilly in his new series as No. 280, by G.H. Aldrich and Company as No. 881, on the "American Scenery/ The Yosemite Valley, California" imprint, by Littleton View Company as No. 881, by J.W. & J.S. Moulton as No. 25, by C. W. Woodward as No. 592 and by Woodward & Albee as No. 592.
440. Also published (Reilly & Spooner) by Clark, Lake and Company as No. 860 and by J.G. Parks.
441. Yo Semite Falls.
445. Also published by Reilly in his new series as No. 263.
446. Also published by Reilly in his old series as No. 414 and by C.F. Copeland.
448. Also published (Reilly & Spooner) by Clark Brothers and by Clark, Lake and Company as No. 855.
451. Also published by Griffith & Griffith as No. 2468.
452. Also published (Reilly & Spooner) on "The Pacific Coast/West from Omaha" imprint as No. 26.
457. Also published (Reilly & Spooner) by Clark, Lake and Company as No. 830.
461. Also published by Perry Mason & Company.
468. Also published by Gustavus Fagersteen, by M.M. Hazeltine and on the "New Educational Series" imprint.
469. Also published on the "American Scenery/ Standard Series" imprint, by Clark Brothers and on "The Pacific Coast/West from Omaha" imprint as No. 24. Also variant negative that was published by Reilly in his new series as No. 307 and by Enno Neseemann as No. 307.
- 470b. Also published by Reilly in the new series as No. 389.
472. Also published by G. H. Aldrich as No. 873, on the "American Scenery/ Tourist Series" imprint as No. 58, on the "American Views/ Standard Series" imprint, by Littleton View Company as No. 873 and on "The Pacific Coast/ West from Omaha" imprint as No. 51.
474. Also published by C.P. Hibbard as No. 66, by Littleton View Company as No. 866 and by J.W. and J.S. Moulton as No. 43.
477. Also published (Reilly & Spooner) by W.L. Hoff.



479. Also published by Reilly in his new series as No. 243, by Clark, Lake and Company as No. 827, by M.M. Hazeltine, by C.P. Hibbard as No. 67, by Lovejoy & Foster and by Walker & Fagersteen.

493. Also published on the "Stereoscopic Views" imprint.

Ferrier, Soulier & Levy. No. 10,290. Crest of Mount Hoffmann, Sierra Nevada Mountains, California, U.S.A. Stereograph. Glass. Paul and Kathy Hickman, Jonesboro, Arkansas. First published by Reilly in his old series as No. 568 and later by Reilly in his new series as No. 255.

494. Lyell Group, from the Summit of Mount Hoffmann, Cal. [stereograph

view]. Also published by Reilly in his new series as No. 427.

496a. Also published by W. M. Chase and by C. W. Woodward as No. 568.

496b. Also published by Webster & Albee as No. 551.

497. Also published on the "American Views" imprint and by Enno Nese-mann as No. 281.

499. Also published by Reilly in his old series as No. 431, by Reilly in his new series as No. 280, by G.H. Aldrich and Company as No. 881, on the "American Scenery/ The Yosemite Valley, California" imprint, by Littleton

"J.J. Reilly, / YOSEMITE VALLEY, CAL. / Photographic Views / OF AMERICAN SCENERY (margins of recto). No number. The River Cottage, Yosemite Valley, Cal. Stereograph. Albumen prints. Orange and lavender cards. Paul and Kathy Hickman, Jonesboro, Arkansas. To better accommodate the more fashionable type of Eastern excursionist who began to arrive in the Valley in 1869, innkeeper J.M. Hutchings hired the versatile John Muir to be his sawyer, designer and master carpenter for a modest 1870 building campaign. (Linnie Marsh Wolfe, *Son of the Wilderness: The Life of John Muir* (New York: Alfred A Knopf, 1945; reprint edition, Madison and London: University of Wisconsin Press, 1978, pp. 125-26, 128.) Next door, on the south side of the Merced, Muir and his small crew of carpenters built the sprawling, three-story River Cottage.



The River Cottage, Yosemite Valley, Cal.



No. 194 The Devil's Gate, U. P. R. R.

View Company as No. 881, by J.W. & J.S. Moulton as No. 25, by Enno Nesemann as No. 280, on "The Pacific Coast/ West from Omaha" imprint as No. 38, by H. Ropes as No. 25, by C.W. Woodward as No. 592 and by Woodward & Albee as No. 592.

- 516. Also published by Richard Behrendt as No. 544.
- 520. Also published on "The Pacific Coast/ West from Omaha" imprint as No. 53 and on the "Stereoscopic Views" imprint.
- 522. Also published on the "The Pacific Coast/ West from Omaha" imprint as No. 40 and on the "Selected Views/ Subscription Series" imprint.
- 523. Also published on the "American Scenery Diamond H/ Stereoscopic Views" imprint and on the "Stereo Views" imprint.
- 533. Also published on the "American Views/ Standard Series" imprint.
- 536. Also published by I.W. Ingersoll by No. 1021.
- 548. Also published by Reilly in his new series as No. 276.
- 557. Also published by J.G. Parks.
- 558. Also published by J.G. Parks.
- 563. Also published on the "California Illustrated/ New Series" imprint.
- 565. Also published on "The Pacific Coast/ West from Omaha" imprint as No. 22.
- 568. Also published by Ferrier, Soulier & Levy as No. 10,290 (lateral transposition).
- 570. Also published by Clark, Lake and Company as No. 8.

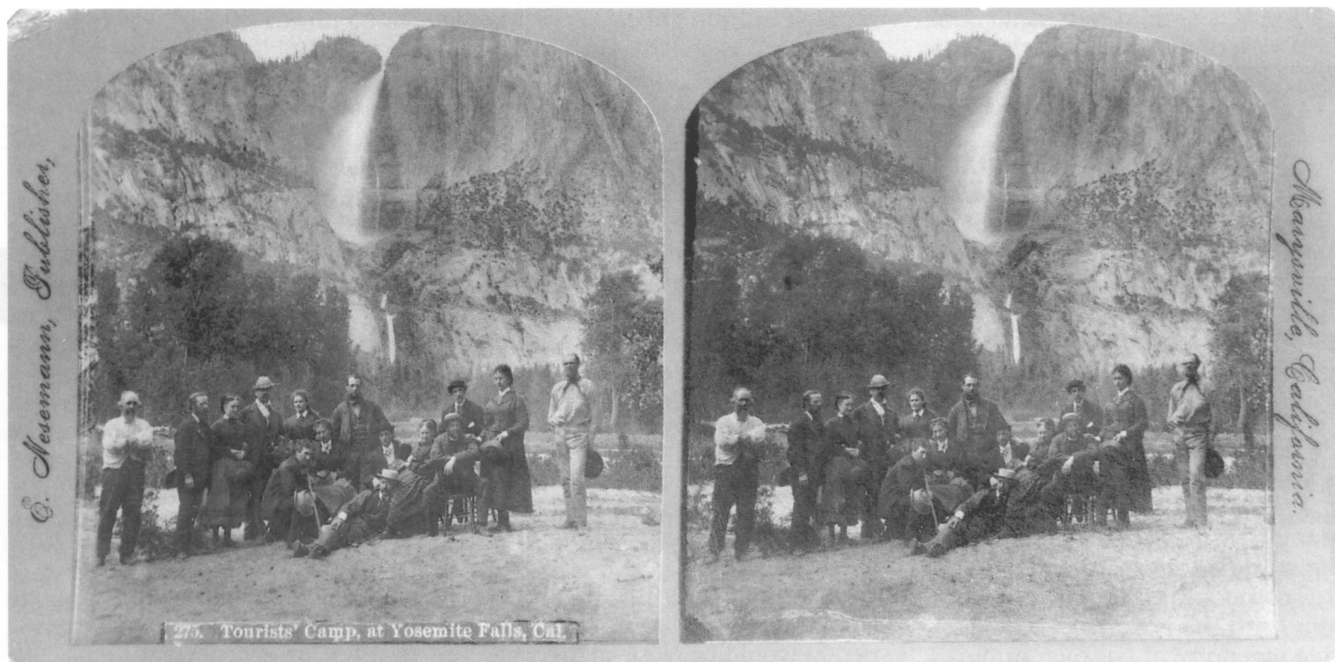
Catalog, New Series

Seven new cross-listings between the successive imprints of Reilly and Nesemann are included in the following list.

"J.J. Reilly, Marysville, Cal./ Views of American Scenery." No. 194. The Devil's Gate, U. P. R. R. Stereograph. Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.

New, New Series View (1879-86)

- 102. Also published on the "American Series" imprint.
- 103. San Francisco, from California and Taylor Streets.
- 104. Also published on the "American Series" imprint and on the "American Scenery/California Scenery" imprint.
- 108. Also published on the "American Views" imprint.
- 112. Also variant negative.
- 115. Also published by Richard Behrendt as No. 555.
- 130. Also published on the "American Series" imprint and by Richard Behrendt as No. 550.
- 133. Telegraph Hill, San Francisco, Cal.
- 136. On the top floor of the Palace Hotel, San Francisco, Cal.
- 145. Also published by Richard Behrendt as No. 558. Also variant negative.
- 149. San Francisco Looking S. W. from Nob hill, Cal.
- 167. Looking East from Woodward's Gardens, San Francisco, Cal.
- 170. Santa Barbara, Looking East, Cal.
- 173. Also published by Richard Behrendt as No. 568.
- 186. Also published by J.J. Reilly and J.P. Spooner as No. 391.
- 214. Railroad Bridge Crossing Bear River, Cal.
- 223. Also published by Richard Behrendt as No. 535.
- 228. Also published by Richard Behrendt as No. 532.
- 234. Also published by Richard Behrendt as No. 533.
- 238. Also published on the "American Scenery" imprint, on the "American Scenery/California Scenery" imprint, on the "Popular Series" imprint, on the "Stereo Views" imprint and by Walker and Fagersteen.
- 243. Also published by Reilly in his old series as No. 479.
- 247. Egg Pickers, Farrallone Islands, Pacific Ocean, Cal.
- 254. Also published by Enno Nesemann as No. 254.
- 255. Also published by Ferrier, Soulier & Levy as No. 10,290 (lateral transposition).
- 262. Also published on the "California Illustrated/ New Series" imprint.
- 263. Also published by Reilly in his old series as No. 445.
- 264. Also published by Enno Nesemann as No. 264.
- 267. Also published (Hutchings' Hotel) on the "American Views" imprint and by Enno Nesemann as No. 267.
- 267. Also published by Reilly in his new series as No. 276.
- 270. Also published by Walker and Fagersteen.
- 275. Also published on the "New Educational Series" as No. 275.
- 276. Nevada Falls, height 700 feet, Yosemite Valley, Cal. Also published by Reilly in his old series as No. 548, by Reilly in his new series as No. 267, on the "American Scenery" imprint, on the "American Views" imprint and by Gustavus Fagersteen.
- 279. Also published on the "Stereo View" imprint and on the "Stereoscopic Views" imprint.
- 280. Also published by Reilly in his old series as No. 431, by Reilly in his old series as No. 499, by L. Dowe and on "The Pacific Coast/West from Omaha" imprint as No. 38.



E. Nesemann, Publisher,

Marysville, California.

No. 275. Tourists' Camp, at Yosemite Falls, Cal.

"E. Nesemann, Publisher, Marysville, California." No. 275. Tourists' Camp, at Yosemite Falls, Cal. Stereograph. Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas. First published by Reilly in his new series as No. 275; also published by T.W. Ingersoll as No. 275 and on the "New Educational Series" as No. 275.

281. Also published on the "American Views" imprint and by Enno Nesemann as No. 281.

284. Also published by Hayward and Muzzell as No. 180 and by Perry Mason & Company.

292. Also published by Gustavus Fagersteen and on the "New Educational Series" imprint.

294. Also published on "The Pacific Coast/ West from Omaha" imprint as No. 40.

303. Also variant negative.

304. Also published by M. M. Hazeltine.

304. Also variant negative.

307. Also published by Reilly in his old series as No. 469 and by Enno Nesemann as No. 307.

309. Also published by Reilly in his new series as No. 369.

309. Also published by Clark, Lake and Company as No. 829 and by Lovejoy and Foster.

312. Also published by Richard Behrendt as No. 542.

318. Also published by Richard Behrendt as No. 544.

323. Three Brothers, Yosemite Valley, Cal. Also published by Enno Nesemann as No. 323.

329. Also published by Richard Behrendt as No. 541.

(Continued on page 17)

"E. Nesemann, Marysville, Cal./Manufacturer of Stereoscopic Views." No. 477. Residence of the late Mark Hopkins, San Francisco, Cal. Stereograph. Albumen prints. Tan, curved card. Paul and Kathy Hickman, Jonesboro, Arkansas. First published by Reilly in his new series as No. 477. Mark Hopkins, one of the Big Four of the Central Pacific Railroad, died in 1878.



E. Nesemann, Marysville, Cal.

Manufacturer of Stereoscopic Views.

No. 477. Residence of the late Mark Hopkins, San Francisco, Cal.

The W1

Under the Hood

A Critical Review by Bob Pfeiff

At long last we have a purpose-built digital stereo camera from a major manufacturer. Many of us have been enjoying digital stereo since the dawn of this corner of the digital age but only with the exercise of considerable ingenuity of our own or purchased from others. The question now is: how well has Fujifilm done and how do we take advantage of it?

From the start we have to accept the baseline that the Fujifilm Finepix Real 3D W1 falls into the category of a point-and-shoot snapshotter's camera. The experienced photographer, of any level, has to adapt to its capabilities and limitations. My observations stem from several weeks and more than 2000 exposures involving numerous situations and planned experiments.

The first thing that impressed me on unpacking my W1 was its weight and solidity. This thing was going to need a big strong pocket. Holding it for shooting presented a challenge. The special pink instruction sheet that was enclosed in the package made it clear that keeping fingers from entering the lenses' field of view was tricky. I still lose an occasional shot because of this

mostly as a result of having to squeeze the body to push the adjustment buttons on the back with thumbs, fingers flailing in front.

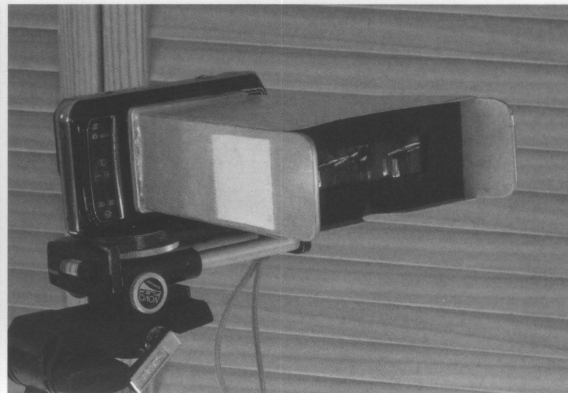
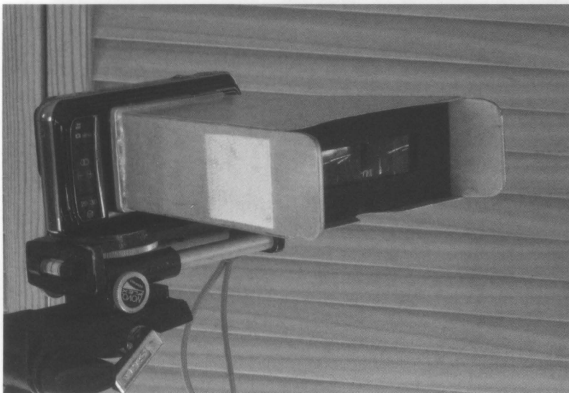
Four hours for initial battery charging meant that my first play period would be close to the wall socket. That didn't last long as the charging light went out fairly soon, battery must have been charged. Not so fast, in a bit over an hour the red warning came on. This time it charged for four hours and then lasted for what seemed a reasonable length of time. This continues to be the case even though I tend to keep the camera turned on continuously for long periods. However, I hardly ever use the flash and recharge often.

Having thoroughly studied the User Manual downloaded from the Fujifilm Web site while waiting for the camera to arrive, I was off and running trying out all the features that interested me. These were exclusively stereo stills. For me, this is a 3-D camera, its fancy 2-D tricks give me no thrills. Movies come later. I went through the various menus, turned off all the sounds and set my long established digital camera preferences as close as possible to what I could.

Then I toured the house shooting this and that before going outdoors.

When I moved outdoors on that sunny day I couldn't see the display well enough to compose a scene, much less set menu choices, parallax, or review what I had shot. Maximum display brightness didn't help and blew out the lighter parts of the scene. The glossy glass surface made a great mirror where I could observe my annoyance in real time. No doubt, an effective light shield would have to be devised. I even wondered about getting out one of my view camera dark cloths as a starter.

Something like the viewfinders on my existing rigs would do it. Each of my two most recent digital stereo camera rigs has had a stereo viewfinder which also serves for reviewing in stereo. These are light weight but do enlarge the cameras considerably. Worth every bit. I eventually solved the display viewing question by building a magnifier viewing hood similar to my previous designs. It uses the optics from a head-band hood magnifier. I had thought to make it removable but decided that not only does it allow me to see the display



The author's hood makes the W1 screen usable in all light conditions with the help of optics from a headband magnifier. Left bonded to the no longer vest-pocket camera, it provides attachment points for a neck strap.

(Stereo by Bob Pfeiff)

in bright light but, in conjunction with the easily accessible 2 second delay timer, it provides the stability of my body in low light, slow shutter situations. That compensates somewhat for the absence of active Image Stabilization in the camera and the slowness of the f/3.7 lenses. Also, it eliminates constant wrestling with reading glasses. The hood also provides for neck strap attachment as the camera no longer fits in a pocket but does fit in a pouch in a photographer's vest or ScotteVest.

Fuji's Web description doesn't clarify the mechanism of the autostereo display. They claim to have invented something new and refer to light direction technology. However, it is not so great. Why? Ghosts. Unavoidable and annoying. The L/R images are poorly isolated and the single central viewing angle is narrow. It serves as an adequate viewfinder but is a poor viewer.

Recorded images look impressive thanks to rather aggressive sharpening and color saturation. Any compensation awaits the computer as there are no menu choices for these or other quality characteristics as has become common in this camera category. Examining images at 100% on the computer shows artifacts indicative of over-sharpening. Color gamut is restricted to sRGB, four sizes of image are available but only old style JPG, no RAW. Continuous shooting is limited to the smallest image size which we once thought was high resolution and may satisfy. Single frame shooting can be frustratingly slow especially if you review the shots for either 1.5 or 3.0 seconds as the images are not saved until the reviews turn off and then the recording is rather slow before the next shot can be made. Such a review is highly recommended as what is displayed while shooting often does not match what is recorded. The camera apparently would benefit from a larger save buffer.

Shooting options are pretty much in line with those familiar from using other digital cameras. We gain some and we lose some, depending upon the choices made. One's tolerance for working through menus as opposed to

using direct acting buttons will steer in a personal direction. Perusal of the Basic Manual's table of Restrictions on Camera Settings will most likely discourage the use of the long list of highly automated "Scene Position" and "Auto" selections all of which leave critical decisions up to the camera. If one chooses to use any of these, they should be understood well enough to not result in disappointment, surprises can be in store.

The only shooting modes that allow selection of desired ISO, Exposure Compensation, and metering modes (matrix, spot, average) are Manual, Aperture Priority AE, and Program AE. There is no Shutter Priority mode. Program AE works well and is highly practical with a minimum of fussing with menus but Aperture Priority is my preference with its more direct control of aperture and accompanying access to exposure compensation. These three modes do not give total control but as much as one can get albeit with delays forced by a complex menu dance, especially in Manual mode. A big plus is the display of shutter speed and aperture at the time of shooting. Other choices allowed to be made by the camera should be monitored, they can be quite different from one's own. In particular it favors high ISOs and shutter speeds, often likely to be unnecessary.

The many button and rocker controls on the camera back give some direct access to adjustments but mainly lead to menu lists. Even with familiarity it is easy to get something you didn't want, either on aiming to adjust or just picking up the camera. One strange choice on the part of the designers was to disable the left rocker on the four way button on the center right when in the 3-D mode. That rocker selects close-up mode for 2-D only. It would be nice to have had a chance to customize its operation or, say, provide direct access to exposure compensation. It can take eleven clicks to adjust an Exposure Compensation of one stop by way of menus. It is the bottom choice on the f-mode menu, the shortcut trick is to get there by scrolling up instead of down thereby cutting clicks by

four. Once that is done and not disturbed one does go directly to that menu line when reselecting the f shooting menu. This applies to other adjustments as well but much better alternatives through direct button assignment could have been provided. I could do without an easily tripped motion picture or 2-D selection button.

Auto white balance sometimes works surprisingly well and other times seems strangely confused. Even cloudy and foggy conditions often require selecting "Shade". It pays to experiment with the few selections available. Sadly, a custom white balance is absent. Some aspects of color balance can be roughly judged on the display but, even after a half-shutter press, the recorded color can change considerably in the review image. This change is usually for the better but still not an accurate rendition which Fuji admits in the manual. My calibrated computer screens' renditions usually ameliorate my concerns and software adjustment is resorted to.

The defining characteristic of the camera that I knew would be a problem for me was the exaggerated depth perspective resulting from the 77mm lens separation. I sold my first Stereo Realist in the early 1950s because I didn't cotton to the stereo perspective of the 70mm lens separation. In preparation for this camera I had done some recent shooting with a 77mm rig cobbled from two previously retired digitals. My preference is a 65mm lens separation which matches my face and has served well on the home-brew digital cameras I have devised over several years. Why did they do that? Is it necessary to shout LOOK, THIS IS 3-D! and hit folks over the head with a two-by-four to make sure they get it? No, I do not like 77mm and the greatly exaggerated depth perspective.

Wide interocular is particularly problematic with close subjects. This can be alleviated somewhat by stepping back and zooming to a longer focal length. This works well for close-ups except for the decreasing width of view as the window is adjusted to cut off the excess sides of the individual left and right images.

This brings us to parallax, Fuji's term for the displayed coincidence or not of the left and right images. The camera specifications list a convergence distance of two meters at the widest zoom angle which, before any actions are taken, puts the default window at that distance. There is an automatic parallax adjustment selection on the shooting menu. Its primary purpose seems to be to make it easy to see the "3D effect", as they refer to it, on the display. With auto-parallax set, pressing the shutter release button the conventional half way to set all the variables also brings the viewfinder images into coincidence based on the focus distance. The photographer is then allowed to make additional adjustments using a rocker on the center left side of the back of the camera. This works well and aids seeing proper stereo and adjusting an image window for the shot. However, this automatic function resets for every shot, so any adjustment made is lost each time the shutter is released. Forget it. Turn the auto feature off, now whatever manual adjustment you make remains for succeeding shots until adjusted again or turning the camera off. Manual and Aperture Priority set auto-parallax and auto-flash to off. Getting away from auto anything has always had a good feel to it, at least to some of us who grew up having to control everything, and now relish having whatever control we can get.

Now, I have really been talking about Window. Nowhere does Fuji mention the concept of window or use the word. Each of us has a personal opinion about window and window violations. This manual adjustment of window will serve whatever preferences one has. If the screen is hard to read one can use a displayed parallax percentage number to make the adjustment once developing a feel for it. The available adjustment range is so wide that you can squeeze the horizontal dimensions of the picture to nil in both plus and minus directions. Note that, upon reviewing images, it is possible to readjust the window and then save the new version. It appears at the end of the line as though a new shot had been taken.

I have mentioned the manuals. A printed Basic Manual comes with the camera along with a more extensive PDF User Manual on a CD, for \$600? The intro on the latter states that it covers using the accompanying software. Its additional material is mostly detail on normal camera operations and connecting to a computer. There is a separate help manual for the FujiPix Viewer software provided. There is nothing about stereo photography in any of this except for the manipulation of files using the new MPO format. This format does nothing but combine the two images into one file and provide facilities to address them. The software is pretty much what is included with any other Fuji compact camera. It doesn't do a thing to handle still stereo images except to split the left and right images from the MPO combo into left and right JPGs or the reverse. It can combine images from some other makes of camera with limitations, but not at all with others.

At the time of 3-D shooting, one has the choice of saving MPO stereo pairs alone or MPO plus a JPG flat (left lens) image. Microsoft Windows Explorer does not know how to display MPO files, they say on the Web that they know about it and are working on the "problem". If you elect to use the MPO + JPG option, Windows Explorer will show the usual JPG thumbnail but the MPO file is presented as a blank icon. Setting FujiPixViewer as the default program for MPO will change the blank file icon in Windows Explorer to a Fuji f icon which one can click to open the image in that program. The JPG image is just an identical copy of the left image which gobbles up fifty percent additional storage and complicates file handling. That JPG appears to be there so that prints can be made by way of DPOF/Pict-Bridge from the camera. A third save choice of just a JPG pair at the outset would have been greatly appreciated.

On shooting I save only MPO files. For complete control of file names and locations I insert the SD memory card into the computer to transfer the images using Windows Explorer drag and drop. I then go directly to FujiPix Viewer, 'split'

the MPOs and save the results. This gives three files for each shot, xxx.MPO, xxx.L.JPG, and xxx.R.JPG all in one folder. Separating the two file types into their own folders allows free viewing the JPGs in parallel side by side stereo by properly sizing the Windows Explorer display. Going into Stereo Photo Maker (SPM) is an alternative. On the SPM website David Starkman has provided a recommended procedure for organizing files. FujiPix Viewer splits the MPOs much quicker than SPM, anywhere from three to ten or more times faster even when SPM makes no additional batch adjustments. One example: 131 Large/Fine MPO pairs, 36 minutes with SPM whose rate at this size image averages 16 seconds each on my computer. FujiPix did that number in a still slow 12 minutes but after completion refused to respond and had to be shut down using Vista Task Manager. That had happened once before with over 210 images split, I now keep the numbers down. File renaming choices and saving locations differ between the two programs so one's preferences need to be sorted out. MPO just gets in my way.

Except for that, FujiPix Viewer could be ignored completely. Similarly to David's approach I set up multiple folders for the various image types. Time is saved by means of having a dummy folder with multiple empty sub-folders which can be copied and pasted into desired locations to receive the appropriate image types.

Using the batch auto-alignment function of SPM while splitting can upset any in-camera window adjustments. Other alignment items accomplished by SPM have proven to be so minuscule that they are unnecessary. Except for splitting, I have been able to print good ViewMagic over/under images by skipping both programs, going directly to Microsoft Digital Image Pro to take advantage of its provision of the Avery postcard template for letter size paper. Most of these images are printed with no modification.

SPM can also be used to open the blank MPO icons presented by Windows Explorer folders directly without splitting the images. You

can then leaf through the stereo images in order and view them in whatever stereo form SPM supports. To go directly to a particular image you need to know its filename (number) or to have 'split' the MPOs into JPGs.

Apparently Fuji expects that users will view the shots either on their V1 photo frame viewer or have lenticular prints made through their SeeHere Web site. I tried the latter a couple times but couldn't find a way to send only one pair to order a 5x7 lenticular print for seven dollars. On selecting to order prints their site tried to download all the images on my computer. End of that. The question then is: why did they build a dual 10 megapixel camera?

Other aspects? Most auto functions work as you might expect. Color response is satisfactory, close enough to the Macbeth Color Checker. There are some of the usual color discrimination variations. Some blue greens and purples in our house are poorly seen, I'm sure you will find others, nature of the beast. I was surprised to find color cast variation between the two images in some cases but for the most part the photo parameters of the two are essentially identical. Your results may vary, as they say. There is no such thing as perfect color no matter what a camera costs. Fuji has chosen to not use their latest Super CCD EXR technology here. Again, this is basically a 3D-novelty-added point-and-shoot snapshooter's camera, we have to learn to make the most of its capabilities and shortcomings as we have done with all of our cobbled digital rigs.

While shooting comparisons between this and other cameras, notably my dual Canon, I noticed that the Canon start up wide view was wider than the W1. It turned out that this was only in the 3-D mode. At 2-D in the W1 the two cameras have about the same coverage. Both are stated to be equivalent to a 35mm camera with 35mm to 105mm 3x focal length zooms. I did some tests and calculations and came up with a 3-D wide 35mm equivalent focal length of about 40mm and a maximum zoom length of at least 145mm for the W1. Back to the

computer and the PDF User Manual. Sure enough, buried in the Specifications under 3-D is the line "Combined optical and digital zoom up to approx. 3.8x (35mm format equivalent: 39mm-149mm). Also on page 19 is "Note that the picture angle of photographs taken in 2-D differs from that of 3-D images." This spec does not appear in the Basic Manual but can be found on line. My supposition is that the designers have taken advantage of electronic compensation for variations in mechanical manufacturing tolerances in aligning the two lens/sensor systems.

There is little to choose among the three f-stops. All provide super depth of field as all these small sensor cameras do. Any characteristics, good or bad, of stopping down appear to be masked by the amount of sharpening applied in JPG compression saves. I tend to use f5 when I can as shooting wide open at high shutter speed for a landscape just doesn't feel right.

So, while we now have a stylish, sexy, smooth, sleek, shiny but slippery stereo camera, those characteristics do not make pictures. More thought to form follows function in the way of ergonomic provision of strategically placed bumps and depressions would make a holdable picture taking tool. Giving priority to 3-D capability with more direct access to controls and extension of adjustments available to the photographer should head the list of design criteria for the next iteration. Half a stereo is flat if one wants it. *Akihabara News* called the W1 the worst camera ever made. They are welcome to their opinion but superlatives are not my dish. At least Fujifilm took note.

This camera will not displace my Canon rig but it will have a limited role to play. As for its becoming a model for others to follow as happened with the Stereo Realist sixty years ago, I hope not. I know how I would do it, you probably have your own dream design. 📷

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THE SOCIETY

News from the
Stereoscopic Society of America

Ray Zone

Remembering Fred Lightfoot (SSA #369)

An inquiry from George Themelis regarding Fred Lightfoot and his role in the SSA brought the following information to light.

Bulletins from the Stereoscopic Society of Great Britain indicate that Fred Lightfoot was a paid-up member of the SSAB (American Branch) in 1968-69 and active in the OX stereo transparency folio. The OX folio was inaugurated (despite some resistance from print folio members) in 1951 and circulated color stereo transparencies in Realist format among members in America, Australia, New Zealand and Great Britain.

In his history of the SSA in both the 1999 and 2000 SSA Yearbook, 25-year SSA General Secretary Norman "Bill" Patterson informs us that 1951 to 1977 constituted the second era of the SSAB which began with the commencement of the OX folio. When SSAB General Secretary Thomas Rogers passed away in 1974, Frederick S. Lightfoot (SSA member # 369) of Greenport, New York, succeeded him in that office.

"Fred Lightfoot was a photography scholar and author, and also

dealt in rare photographs," notes Patterson. "His interest in all aspects of stereo was well known, but his folio participation at that time became limited to the transparency group. He guided the SSAB into its affiliation with the National Stereoscopic Association in 1977, at which time he turned the duties of General Secretary over to Dr. Brandt Rowles (now of Loveland, Ohio)." Fred Lightfoot was made a Life Member of the SSA at that time (only the fourth Life Member as of that date).

"In September of 1977 Fred Lightfoot reported to the membership on the details of the affiliation with the NSA. Treasurer Brandt Rowles represented the SSAB in making the proposal for joining the Society to the NSA following discussions with NSA officers (Richard Russack, John Waldsmith, and Gordon Hoffman).

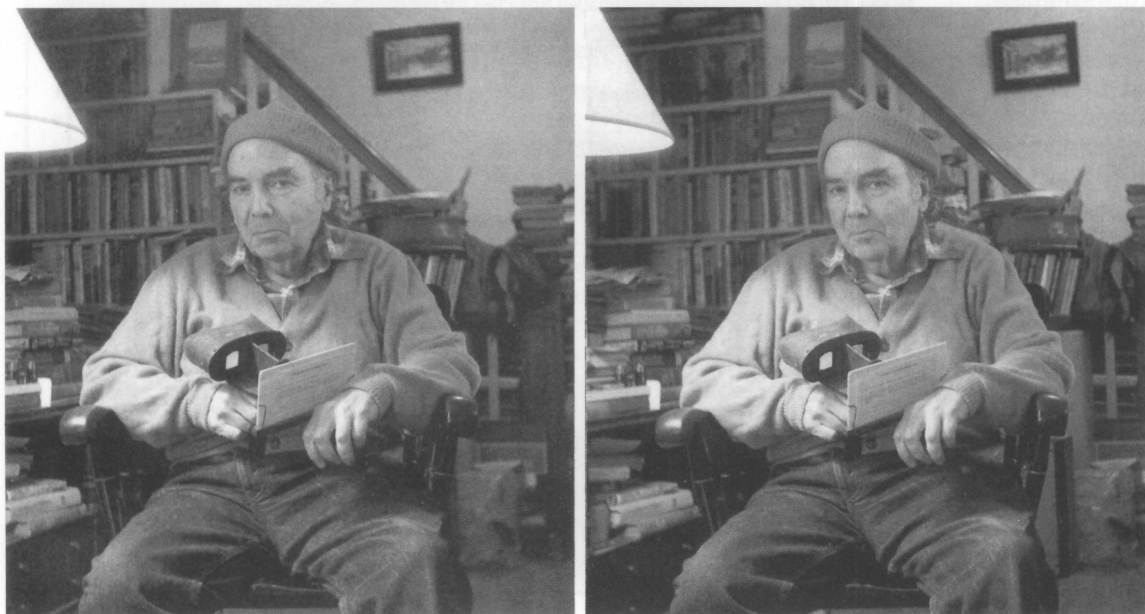
"This resulted in an agreement in which the SSAB became an affiliate of the NSA but retained its structure, its relationship with the other branches of the Society, and separate dues. New members were required to join the NSA to be eligible for SSAB membership, but although encouraged to do so, current members were exempted

(most already were NSA members).

"The Society would supply a regular article to *Stereo World*, the NSA bimonthly journal. In order that the transition be as smooth as possible Dr. Brandt Rowles was asked to assume the duties of General Secretary, at least for an interim, as he was closest to the negotiations and was an officer in both organizations. All of these things became effective January 1, 1978."

Lightfoot died in an auto accident in inclement weather in 1992 at the age of 72. About the auto accident, SSA Life Member Nick Graver writes "Fred died a short time following an auto accident 17 December, 1992. The car slid on 'black ice.' They [Lightfoot and his wife] both survived the accident, but he was fatally injured. Margaret was very seriously injured, but did recover. The daughter made it to the hospital, and was sure Fred was aware of her, and squeezed her hand before he died.

"We probably passed them in traffic that day, as we went to Long Island for our son's wedding the next day," notes Graver. "We never knew anything about the accident till much later, after Margaret recovered, rehabbed, and returned home."



Frederick S. Lightfoot surrounded by his overflowing collection of books and images in October, 1990. Stereo by N.M. Graver



"He was a decorated naval officer in World War II," writes Patterson, "and in his latter years he was very active in the study of postal history."

Letterbox Folio

In June 2009, Letterbox Circuit Secretary Craig Daniels revised the procedures for this most economical of folios. Letterbox Folio, you will recall, was created by Daniels to maintain SSA postal tradition by the use of a new format for stereoviews printed on a single sheet of paper folded in half so that member comments could be written on part of the entry itself (but not behind the view images). The folio is circulated in a single 6"x9" envelope that is no more than 1/4 inch thick and under 3.5 ounces in weight.

There are currently 8 members of Letterbox Folio and the images making the rounds are all outstanding. A great current example is "Mushroom Cloud" by Harold Jacobsohn. This view was shot with Twin Sony P-200 cameras in August, 2009 and processed using Stereo Photo Maker (SPM) and printed on glossy stock with an HP-D7260 printer. The view depicts fires near Los Angeles in August that destroyed thousands of acres. "In the beginning," notes Jacobsohn, "the clouds had a very eerie appearance." Circuit member David Goings found the image "very dramatic" and member Les

"Mushroom Cloud" by Harold Jacobsohn. The Letterbox Folio entry depicts fires near Los Angeles in August, 2009.

Gehman was impressed with the "menace" conveyed in the stereoview.

How to Contact the SSA General Secretary

Ray Zone is the General Secretary of the Stereoscopic Society and in that position is responsible for production of this column in *Stereo World* magazine and, according to the Membership Rules of the Society, is also "responsible for trying to keep the Society functioning effectively and harmoniously." Folio secretaries and any member of the NSA interested in the SSA is encouraged to contact Ray via email at:

r3dzone@earthlink.net 

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folios. Both print and transparency formats are used, and several groups are operating folio circuits to meet the needs in each format. When a folio arrives, a member views and makes comments on each of the entries of the other participants. His or her own view, which has traveled the circuit and has been examined and commented upon by the other members, is removed and replaced with a new entry. The folio then continues its endless travels around the circuit. Many long distance friendships have formed among the participants in this manner over the years.

Stereo photographers who may be interested in Society membership should contact the Membership Secretary, Les Gehman, 3736 Rochdale Dr., Fort Collins, CO 80525, (970) 282-9899, les@gehman.org

John James Reilly *(Continued from page 11)*

- 333. Hutchings Hotel and Sentinel Rock, Yosemite Valley, Cal. Also published by Reilly in his old series as No. 413.
- 352. Also variant negative (different cloud negative).
- 369. Suspension Bridge, Niagara Falls, New York. Also published by Reilly in his old series as No. 7, by Reilly in his new series as No. 309 and by George E. Curtis as No. 195.
- 382. C. P. R. R. Hospital, Sacramento, Cal. Also variant negative.
- 389. Yosemite Digger Indians, Yosemite Valley, Cal. Also published by Reilly in his old series as No. 470b.
- 404. Also variant negative that was published by Woods.
- 411. Devils Laboratory, Geyser Springs.
- 421. Also published on the "American Scenery/Stereoscopic Views" imprint.
- 426. Also published on the "Stereoscopic Views" imprint.
- 427. Also published by Reilly in his old series as No. 494.
- 430. Summit of Mount Hoffman, Sierra, Cal
- 434. The Devil's Kitchen, Geyser Springs, Cal. Also two variant negatives.
- 436. Also variant negative.

(Continued on page 23)

Silverfish and Pinholes

An Interview with Jayme Wilkinson

by Ray Zone

Working at Blue Sky Studios, Jayme Wilkinson was the Stereoscopic Supervisor on *Ice Age 3: Dawn of the Dinosaurs*, a computer-generated (CG) feature produced in both 2-D and 3-D. Released July 1, 2009 by Twentieth Century Fox, *Ice Age 3*, driven largely by the 3-D version, has grossed a worldwide total box office to date of \$886 million and was the second highest-grossing film of 2009.

The 2nd Annual 3D Summit in Hollywood, on September 16 and 17, 2009 provided an opportunity to sit down with Wilkinson and discuss some of the stereoscopic techniques used to produce this extremely successful 3-D feature. Wilkinson is very knowledgeable about the sophisticated techniques used in contemporary production of CG 3-D movies and spoke articulately about their use.

Zone: Could you tell me a little about your background in 3-D and what you did with stereography before *Ice Age 3*?

Wilkinson: I've been in the computer graphics industry since 1988. I went to Cleveland Institute of Art, got my Bachelor in Fine Arts and when I graduated, a little company from Marin County came by and showed one of their pieces of hardware to us. That was actually Pixar and they brought up the Pixar Rendersafe Loader and gave us a demonstration. I looked at this thing and thought "Oh my gosh, you can do so much with this!" So I went back to school to learn computer science because I thought the computer was going to be the way of the future. I guess I was wrong! (laughter)

Then I went back to school to get a computer science degree and when I was there I met a man named Ed Lautner who told me I needed to get my Masters in

cinematography. So I did my Master's work at Ohio State and after that I went to work for a company called Alias Wavefront, out of Atlanta, Georgia, and did some demonstration work. I started working with SGI and virtual reality and worked with Boeing, NASA and the Disney Imagineers, CNN, all these companies. With my time at Alias Wavefront, I got a lot of experience working with different systems using computer graphics for different applications.

Zone: How many of those were stereoscopic?

Wilkinson: The NASA project was stereo as well as a job with Harris. I also worked with USA, the United Space Alliance, about what to use for their CAVE environment, you know, the Computer Aided Virtual Environment. That involved a room where they used Fakespace with stereoscopic glasses to do astronaut training. I did a lot of work with that. I still do and talk to them every once in a while and they bounce a lot of ideas off me.

So, that's where I really got exposed to stereo. With the opportunity to work with Blue Sky Studios, I was really hooked into it at the beginning. I wasn't sure what was going to happen if 3-D didn't take off. But they told me not to worry, that there would be a spot for me. We started working on *Ice Age 3* doing some development for tools in Maya, proprietary tools for viewing and rendering, even the 3-D stuff. I did a lot of research. And I read books by Lenny Lipton, even your books about the history of stereo photography. I learned a lot of very interesting ideas, techniques and practices that were one way or another incorporated into the work with *Ice Age* in stereo.



The familiar *Ice Age* creatures seen in Jurassic surroundings from inside the jaws of a dinosaur in this *Ice Age 3* in 3D poster.

There were things we didn't do like the "floating window" technique. We didn't do that because we felt if it was going to be projected and cropped, it would lead to problems. But we did use this technique called "parallax correction" which is written about in a paper by Lenny Lipton. With this technique, it allowed us to tuck imagery that goes off the edges back into the screen. That way we didn't worry about floating windows because we just had a black edge and the projection is cropping that stuff off. If it's a really bad projection like when I saw *Ice Age 3*, they punched in on 25 percent of the screen and ruined it anyway. It was really unfortunate.

At Blue Sky I built the tools, the team, the post production pipeline, everything to do *Ice Age 3* in 3-D.

Zone: Was stereo incorporated into the entire pipeline with the 2-D? Or was it a separate track?

Wilkinson: It was done as a parallel process with mono. 2-D went through a standard pipeline. There was a separate process for stereo. And we called it "stereo" because the term "3-D" could be confusing. "3-D" could refer to models, CG, or rendering.

It's kind of interesting with these panels at the 3D Summit, people talk about the vocabulary of working with stereo. Each studio does this. We actually built our own terminology for stereo. We had little catchphrases like "silverfish" or "pin-holing."

Silverfish, for example, referred to textures that didn't match between the left eye and the right eye. There were "rainbow" effects. We said "it looks like a trout." With "pin-holing" you had effects that looked like they were backlit through leaves. You get little holes that break sunlight through in one eye but not the other.

Zone: That's related to specularly.

Wilkinson: Exactly. There were specular highlights on character's eyes. Brightly lit elements had them. You have to come up with your own terminology for these things. It's very interesting.

Zone: How much design for 3-D was possible? Or was it more of a retrofit of the 2-D version of the film for 3-D "damage control" since it was released in both formats?

Wilkinson: One of the main things we did was to make stereo its own answer, a separate solution. Anything we did could not hold up production on the 2-D version of the movie. The 2-D process went ahead like a train running away and we just had to hang on to stay with it. It was kind of difficult because we had just started the 3-D department and we started it six months late. The funding wasn't there at the beginning and they had a lot of decisions to make with the hiring process, the equipment and procurements. We really were behind the eight-ball.

Some of the things that we wanted to do, continuously throughout, got crushed in time. We wanted to do proper depth scripts on every shot and every

sequence. In reality we only got depth scripts for about half of the movie.

Zone: Where did you get the concept of the depth script? Where did that come from?

Wilkinson: I think it was actually at a 3-D application and device conference a couple of years ago. It was actually for something else but I thought that I could apply that idea to communicating how I wanted the depth to happen in the movie. It was akin to what they called "depth disparity" and I remember going back to the studio and seeing the art director doing a "color script." I equate the depth script very closely to a color script.

That's where the concept came up. But I'm sure there is also hearsay from other people, articles and things I've read. The whole idea is that it's set up much like a contact sheet where there is a shot from the story in a layout with the first frame and the last frame. Having the first frame and the last frame is very important because we wanted to make sure throughout the movie that the continuity didn't pop in and out to fatigue your eyes. That would taint the 3-D moviegoing experience, right? So, we wanted to make sure the depth was continuous from shot to shot. And we had many sequences together that were so very different.

Zone: From close to deep?

Wilkinson: Very close to very deep. And we had to come up with some new techniques to transition the user. We have one transition in *Ice Age 3* where I actually pulled an idea from the U2 Concert 3-D movie. They did depth fades and we did exactly that where we took a character that was on a layer by itself real close to the camera and moved him backwards before the deep shot.

Zone: Was it a cross dissolve?

Wilkinson: Yes, it was a cross dissolve. And it worked out really nice. If it had been a cut, it would have been a problem.

Zone: So during the cross dissolve you changed the parallax by animating the parallax values.

Wilkinson: Yes, we used animated parallax values only for the character and not the entire image.

Zone: What kind of range of interocular did you have from the smallest to the widest throughout the film?

Wilkinson: The smallest was .01 inches apart. Very small.

Zone: That's tiny.

Wilkinson: Yes, almost zero. And the widest was 2 inches.

Zone: 2 inches is the widest interocular you used? Now that's in human terms, close to the average distance between our two eyes. But you were working in a virtual space, which is a little different.

(Continued on page 25)

.....
Jayne Wilkinson, Stereoscopic Supervisor on Ice Age 3 in 3D. (Stereo by Ray Zone)



Yuletide 3-D Thrill Ride

Charles Dickens' *A Christmas Carol* Takes Flight in Z-Space

by Ray Zone

There's no doubt that Jim Carrey was born to play Ebenezer Scrooge. He brings both voice and imagery to the Robert Zemeckis version of Charles Dickens' classic yuletide fable *A Christmas Carol* in 3-D which opened November 6 in "Disney Digital 3D," RealD 3D, IMAX 3D and 2-D, pulling in \$31 million on its opening weekend. Carrey not only plays Scrooge along with seven other characters and the three ghosts who haunt him but his rubbery frame, through hi-tech performance capture, invests all of his characters with a high-speed kinesis, typical of the Zemeckis filmmaking style.

Reviewing the film in the *Los Angeles Times*, film critic Betsy Sharkey characterized Carrey's performances as "a blizzard...of theatrics to weather" and calls the film "an exasperating re-imagining of the Dickens classic as a 3-D action-thriller zooming through Victorian London," with the moral "almost lost in the snowdrifts of special effects." The critique, harsh though it is, emphasizes a potential pitfall for stereoscopic cinema in suitably handling the all-impor-

tant aspect of narrative, suspension of disbelief and the vital element of emotional engagement.

This is the third 3-D film that Zemeckis has directed, following the groundbreaking stereoscopic movies *The Polar Express* (2004) and *Beowulf* (2007). All of the Zemeckis 3-D movies exploit increasingly sophisticated "mo-cap" (motion capture) technology in rendering CG (computer generated) worlds rich with spatial information. Camera mobility is a hallmark of Zemeckis films, even in 2-D, and the swirling, swooping bird's eye views are particularly active in *A Christmas Carol* in 3D.

When such camera mobility in Z-space increases emotional engagement on the part of the viewer, the stereoscopic aspect is secondary to that of emotion and the story itself. But when the 3-D technology calls attention to itself, the emotional connection may be broken. After a brilliant sequence with the ghost of Christmas present and the stereoscopic mise-en-scene serving as a heart-wrenching 3-D window on the tale, Zemeckis flounders with the third act featur-



ing the ghost of Christmas future.

This perennial Christmas tale is PG-rated "for scary sequences and images." Those elements are most prominent in the third act and the hyperkinetic sequence, as florid as a videogame, is curiously distancing. By this time Dickens' classic tale has usually built emotional momentum leading to the moving and joyous coda to the story. But, unfortunately, the nightmarishly rendered third act sequence falls emotionally flat.

Otherwise, *A Christmas Carol* is well worth seeing in 3-D. The problem of "the uncanny valley," where the eyes of CG characters appear dead, is increasingly diminished and for most of the yuletide joy ride, delight follows upon delight. The opening and much of the subsequent film will cause a lump in the throat, and occasional laughter, even with a slight stumble before the finale.

Large die-cut standees in theaters emphasized the 3-D effect.



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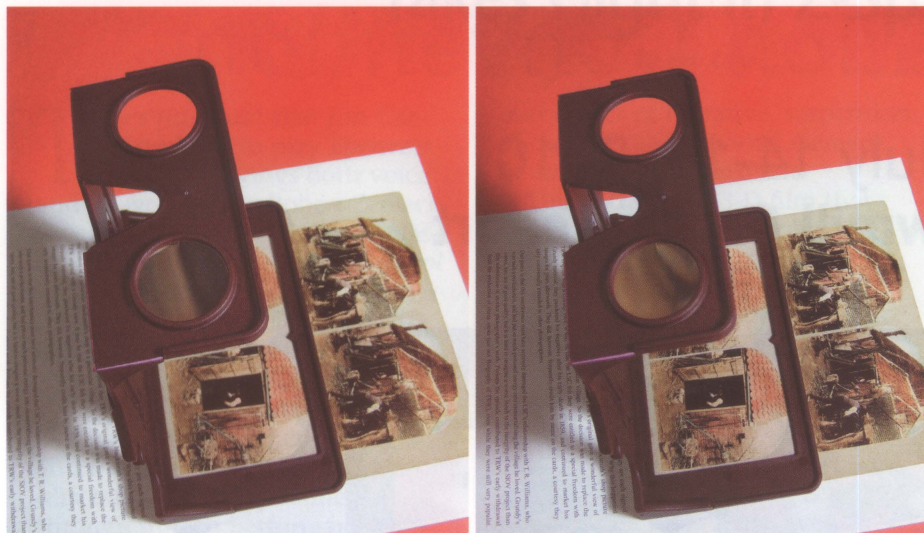
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OWL Stretching Time?

by John Dennis



An OWL stereoscope positioned over a T.R. Williams view on a proof page from *A Village Lost and Found*. OWLs included in the book slip case are this dark maroon, but other colors appear separately.

Along with the wide popularity of the book (now in its second printing), the OWL stereoscope included with *A Village Lost and Found* (SW Vol. 35 No. 2, page 33) by Brian May and Elena Vidal has become an item of considerable interest in itself. (SW Vol. 35 No. 3, page 8.)

The folding and focusing viewer is available separately from the book from the London Stereoscopic Company, www.londonstereo.com/lsc_shop.html. This is because the OWL can be used not just for other stand-on-the-page applica-

tions involving image pairs similar to those in its parent book, but also to view full size stereoviews on either flat or curved mounts. A small flange along the bottom of the front opening, combined with the clever design of its curved corner braces, allows the polypropylene plastic OWL to hold nearly any view quite safely and without the presence of the sometimes intrusive wire holders (and their shadows) found on the stages of most standard Holmes type viewers.

In addition, the OWL's double-track focusing provides more alignment stability than even some of the best Holmes type viewers with their single tongue and simple tension springs on a sliding stage. The first time the OWL's lens board is moved back from the front may take some effort, but after that the adjustment is easy, and the two halves of the viewer remain in whatever focus position they are left. Unlike most paper or plastic stand-on-the-page viewers, the OWL lacks a septum that could cause a shadow on one image. A handy pointer at the top center of the front opening makes it easy for beginners to position the viewer over the center line of printed pairs—not always easy with a *Stereo World* Iorgnette or a small Loreo viewer.

At maximum extension, the OWL has a focal length of about 6.25 inches. The lens separation is 78mm, providing a prismatic effect with average human eyes looking through the inner third of the lenses. Here it's essential to keep in mind that the OWL's optics and overall dimensions were designed for reproductions of views by T.R. Williams with their 64 to 70mm width images. Adding the fairly wide (and varied) septums, the point separations average from 69 to 72mm.



A curved mount view held in place by the bottom flange and corner braces.



The London Stereoscopic Company logo between the dual focusing tracks on the bed of the viewer.

Some have claimed the OWL is unacceptable for viewing Keystone type views with an average 75mm separation and images of the same width. Others have simply noticed the round lenses and assumed the OWL was intended for parallel viewing of 6x13 format views. In fact, complete, round lenses have been employed in full-size stereoscopes for over a hundred years by positioning them wider apart than 65mm to use the prismatic effect of viewing through the inner edges—exactly the same thing achieved by cutting a lens in half and mounting the pieces in a viewer lensboard with the thinner edges pointing inward. Wide-mounted full lenses in book covers like the recent series by NSA member Greg Dinkins (SW Vol. 35 No. 3 page 7) are a good example, the latter using separations of 80mm for pairs of 72mm wide reproductions.

The OWL's degree of prism effect is just right for (surprise) the T.R. Williams size views as reproduced in *A Village Lost and Found*. When a Keystone view is inserted behind the lip of the stage, most people including beginners report no problem fusing the images. The degrees of magnification and prism effect have varied between stereo-

scopes for 150 years or so, and most people are able to use about any combination of view and viewer with only a little (if any) initial effort. Ideal stereo viewing situations have more often than not been happy accidents over the years.

The OWL's thumb-notch focusing of the lens section takes only a little getting used to, with the lack of a traditional bottom handle being more noticed by most users. Since most people will probably leave the focusing adjustment in one spot, a handle could easily be added using a drill, screwdriver and piece of broomstick. Those

who make their own stereo prints with the help of StereoPhoto Maker may find the OWL a better way to share images than lorgnette type viewers, as it folds for easy mailing and can be snapped together over and over. Even unmounted 4x6 inch print pairs lean behind the bottom flange against the top of the front for reliable alignment.

There is one application for which the OWL is unfortunately not designed. The slightly smaller image pairs in T.R. Williams views (like many from the first half of the 19th century) have a total width ranging from about 5.2 inches to 5.5 inches. For its intended use as a stand-on-the-page book viewer, the OWL's front opening is just barely over 5.5 inches wide to accommodate those specific reproductions. For full size reproductions of Keystone type views as found in *Stereo World* and many books, the OWL crops at least a quarter-inch off each side of the 6 inch or wider total pair. True, the windows of more than a few vintage views and some modern stereographs would benefit greatly from exactly such cropping, but that service probably shouldn't be arbitrarily left to the design of the stereoscope.

On the bottom, the viewer is identified as the "OWL 1." If the OWL 2 was "stretched" (with apologies to the *Monty Python* crew) just a little in the front opening and perhaps just millimeters in the lens separation, it could become a truly universal stereoscope for books, magazines, vintage views and modern print pairs. 📷

John James Reilly (Continued from page 17)

- 437. The Devil's Kitchen, Geyser Springs, Cal. Also variant negative.
- 440. Also published by Richard Behrendt as No. 540.
- 467. Petaluma.
- 473. Also published on the "American Series" imprint.
- 479. Also published by Enno Nesemann as No. 479.
- 481. Birdseye View of Sacramento, from Top of State Capitol, Cal.
- 483. Occidental Hotel, San Francisco, Cal.
- 486. Pacific Bank, corner Sansome and Pine Streets, San Francisco, Cal.
- 487. Grand Hotel, San Francisco, Cal.

- 488. St. Mary's Church, San Francisco, Cal.
- 489. Kearny Street, from Market, San Francisco, Cal.
- 490. San Francisco Saving Union, California Street, San Francisco, Cal.
- 491. Crenellated Structure, San Francisco, Cal.

New Publishers

Copeland, C.F. Brockton, Massachusetts.

Hayward, Edwin J. and Muzzall, Henry W. Santa Barbara, California.

(Continued on page 25)

A Stereoscopic Symphony of Horror

F.W. Murnau's 1922 Classic Returns in 3-D

review by Ray Zone

The very first film adaptation of Bram Stoker's classic 1897 horror tale *Dracula* was an unauthorized version directed by F.W. Murnau from a script by Henrik Galeen and released in 1922 with the title *Nosferatu, a Symphony of Horror*. Murnau's film was a masterpiece of German expressionist cinema but a bitter lawsuit by the Stoker estate caused most of the known copies to be destroyed shortly after its initial release.

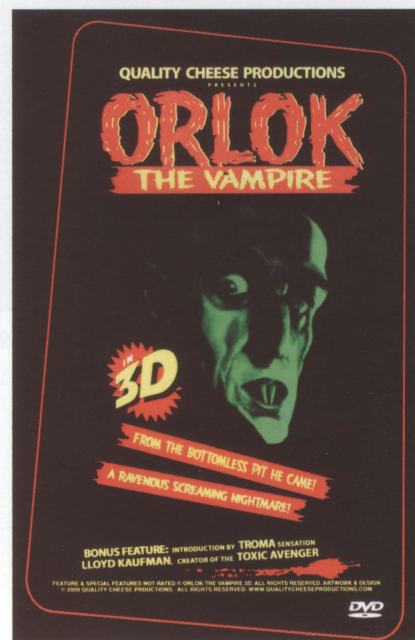
Hungarian film critic Bela Belasz in 1924 wrote that scenes in *Nosferatu* conveyed "a chilly draft from doomsday." Unlike most of the German expressionist films, which were shot in the studio, *Nosferatu* made extensive and imaginative use of actual exteriors. In her classic study, *The Haunted Screen* (University of California Press: 1973), Lotte Eisner wrote that "the architecture in *Nosferatu*, typically Nordic—brick facades with stubby gables—is perfectly adapted to the film's strange plot. Murnau did not have to distort the little Baltic townscapes with contrasting lighting effects: there was no need for him to increase the mystery of the alleyways and squares with an artificial chiaroscuro." This kind of visual approach, of course, is very well

suited to a stereoscopic treatment.

"But," added Eisner, "it was in the portrayal of horror that the camera of Murnau and [cinematographer] Fritz Arno Wagner excelled." She observed that "Murnau created an atmosphere of horror by a forward movement of the actors towards the camera. The hideous form of the vampire approaches with exasperating slowness, moving from the extreme depth of one shot towards another in which he suddenly becomes enormous."

Producer/Director Keith Carter figured that all of this made *Nosferatu* an excellent candidate for stereo conversion and re-release on DVD in anaglyphic 3-D under the new title *Orlok the Vampire in 3D*. "3-D," states Carter, "offers viewers a chance to sample a true masterpiece with a contemporary spin." New stereoscopic intertitles in English have been added along with a fresh musical score, voicing and sound effects. A few transitional animated segues of a screeching bat in negative parallax have also been added to demarcate the main sections of the narrative.

The musical score by Sound-dogs.com, ranging from ragtime and playful electronica to full orchestra, couldn't be more per-

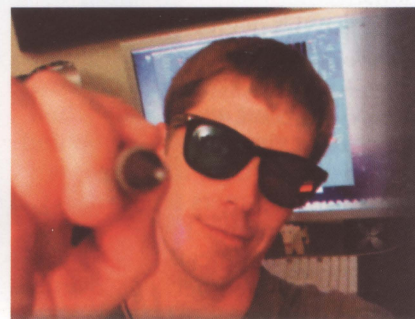


fect. Though exceedingly varied, the music makes a sweet fit with each scene it accompanies. The sound effects (fx) by Hollywood Edge are beautifully done and never exaggerated, always enhancing the scenes. The challenge in creating music and sound fx for a vintage masterpiece like *Nosferatu* is that both could easily go "over the top" and merely serve up the story as kitsch, even undermining the work as merely lowbrow camp.

Two anaglyphic frames from *Orlok the Vampire*. ©2009 Quality Cheese Productions



Stereo conversion artist Chris Heuer.
©2009 Creative Cow



This never happens and the voiceovers and vocal fx by Jan Johns and Andy Och are pitch perfect. The result is a beautifully recreated masterpiece that plays wonderfully balanced at once as sly tongue-in-cheek and straight horror film.

To convert the film to anaglyphic stereo Carter retained the services of Chris Heuer, owner of Freefall FX, an animation and effects house located near Washington DC. With an article in the May/June 2009 "Stereoscopic 3D" issue of *Creative Cow* magazine, Heuer discusses the stereo conversion of *Nosferatu*. "I was intrigued with an effect that After Effects has called '3D Glasses,' and had been experimenting with 3D After Effects scenes that contained two virtual cameras," explained Heuer. "I rotoscoped [cut out] each element that I wanted to give depth, duplicated the rotoscoped mask, offset it a few pixels, and used the AE's 'Reshape' effect, which basically morphs the pixels from Mask 1 to Mask 2."

Rotoscoping is a tremendous amount of work so the decision was made to only give full stereo treatment to the shots with Orlok the vampire in them. It was both a pragmatic and aesthetic decision that worked out very well. Many of the prefatory scenes leading up to Orlok's castle have limited depth, the effect of a low relief, which lends added impact to those moments when we first see the vampire in full depth. Many of the visually quieter parts of the film were converted to stereo using a gray scale displacement map for volumetric roundness. It all resulted in anaglyphic 3-D that is easy to view.

Other bonuses in the DVD package include an amusing (2-D black-and-white) introduction by Lloyd Kaufman of Troma Entertainment, two pairs of anaglyph glasses, a postcard and a button for your lapel. All for \$19.95. I got mine and if you're a fan of classic horror and 3-D, you're going to want to get yours.

Ordering information and interview with Keith Carter can be found at: www.qualitycheese productions.com. 

Silverfish and Pinholes

(Continued from page 19)

Wilkinson: The algorithm we have set up for our camera rig allows for us to use Lenny Lipton's parallax equation. A lot of people use that. But everything is based on a 2 inch interocular distance. The reason we chose that is because 95 percent of all human beings are between 2 and 2 1/2 inches. And we were doing a family movie with lots of children whose eyes are only 2 inches apart. That's why we used that.

Zone: Now, that 2 inches, of course, is relative to the scale of your subjects. How did you calculate for that?

Wilkinson: It was based on the scale of the world. Our environments are based on real world units. Scrat, for example, was about 2 feet high.

Zone: So with 2 inches maximum interocular and real world scale, you didn't really have any hyper-stereo using a wider base.

Wilkinson: Not really. And we tried to stay away from that. We did have an aerial sequence where we got a very surrealistic effect using an 18mm lens. The parallax and the interocular were shifted as high as we could take it. When a character in the shot reaches out to the camera to take something, the hand distorts.

Zone: That was a function of the wide angle lens and the distance to the subject. But you were still no more than 2 inches wide with your stereo base?

Wilkinson: Yes, almost 2 inches.


Zone: How often did you use dynamic variable interocular during the shot?

Wilkinson: 60 percent of every shot used dynamic interocular. We

focused on the story and what we needed to tell the story in the shot. If we needed to, we animated either the screen location or the volume space. As a matter of fact, we got into a little bit of trouble with that with situations where the lighting would lock off for the shot and make it static. We needed to pan with the camera in the shot but if we did that it would kill the 3-D. When that would happen, the characters would just float in space. They wouldn't even look like they were sitting on the ground. (laughter)

There were 10 to 20 shots in the movie where that happened. We locked off the camera when we animated. Because we knew what would happen if we moved the camera. But we had to re-render everything for the moving camera anyway.

Zone: What are you most proud of that you were able to achieve with the 3-D in *Ice Age 3*?


Wilkinson: That we were able to enhance the storytelling and not make it a theme park ride. That meant making the 3-D work with the story and not fight the story. Also, not tiring out the eyes of the audience. One of the most interesting compliments I get from people is when they say "I went to see your movie. And I want to see it again." That was our main goal with the 3-D in the movie, to make sure it was a comfortable and pleasing entertainment experience. 

John James Reilly (Continued from page 23)

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Theaters Packet Signals Custom View-Master Return



Scene 5, Reel 2 of Frank Gehry: 3 Theaters, "Proscenium detail" at the Pritzker Pavilion in Chicago. This shot captures both the complex main shell and some of the curved trellis structure holding the speakers.

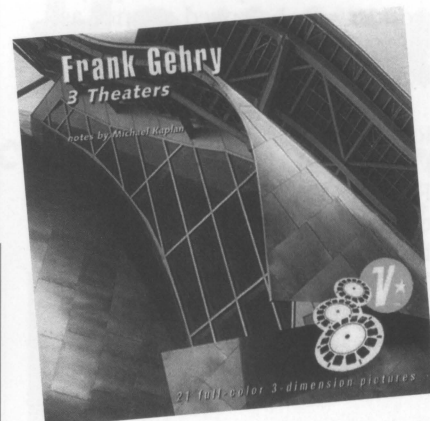
review by John Dennis

The first custom View-Master reels produced by Seattle's Alpha Cine company have enabled View* Productions to continue their impressive series of stereoscopic architectural and design titles. This latest packet, *Frank Gehry: 3 Theaters*, is the ninth the firm has published and is a sequel to the earlier packet, *Frank Gehry: Sheet Metal* (SW Vol. 27 No. 3, page 30).

The new packet follows Ghery's work in the 21st century with one reel each devoted to The Walt Disney Concert Hall in Los Angeles, the Pritzker Pavilion in Chicago's Millennium Park, and the Sosnoff Theater in Annandale-on-Hudson, NY. Reel 1 opens with a 2002 construction stereo of the Disney Concert Hall, then tours the sculpted metal exterior features as well as the complex, curving stairs and

balconies of the interior as well as the lobby and the 2,265 seat auditorium.

Reel 2 explores the almost completely abstract looking Pritzker Pavilion in Chicago with its 120-foot-high, petal-like shell above the stage. Scene 2 on this reel shows the pavilion dramatically reflected in the curved metal skin of Anish Kapoor's alien seed-pod looking *Cloud Gate* sculpture, along with parts of the Chicago skyline. Other scenes reveal stereoscopic details of the stage shell and of the sculpted support system for the



100+ time-corrected speakers that provide acoustic intimacy for an outdoor theater covering nearly four acres with room for 11,000 people.

Reel 3 is devoted to the smaller but no less exciting Sosnoff Theater on the campus of Bard College at Annandale-on Hudson, NY.

Scene 3, showing foyer roof detail, is reproduced on the cover of the packet. The building's smaller size makes imagery of the auditorium space and balconies a more ideal opportunity for stereography, and the bright red walls of that space offer an interesting contrast to the cool metal skin of the exterior.

The quality of the image reproduction on these reels reminds us of the best of the "old days" at View-Master. The close professional attention to detail possible at a smaller firm like Alpha Cine offers hope that custom and scenic View-Master reels can endure as a reliable format well into this century.

3-D in the Womb

If you thought your first chance at 3-D videos of your kid would be just following (or during) their birth, put down that W1 and think again! NVIDIA Corp. and Siemens Healthcare have demonstrated a new, immersive 3-D ultrasound viewing experience that enables expecting parents and their medical caregivers to view the fetus with incredible detail using 3-D glasses.

Utilizing technology that has its roots in immersive 3-D movies, the new Siemens ultrasound fourSight™ Workplace image management software uses NVIDIA® 3D Vision™ stereoscopic glasses and NVIDIA® Quadro® FX high-end professional graphics solutions to create the most stunning 3-D/4-D images of an unborn baby.

The clinical images, obtained with the ACUSON S2000™ ultra-

Frank Gehry: 3 Theaters

View-Master packet by Michael Kaplan, View* Productions 2010. Three reels plus descriptive brochure, \$35 postpaid from www.viewproductions.com or View Productions, PO Box 11835, Knoxville TN 37939.

sound system, are further enhanced using Amnioskopic Rendering, a Siemens-exclusive technology that produces photo-realistic 3-D images of the fetus. While conventional 3-D ultrasound technologies use two-dimensional monitors for the evaluation of 3-D images, NVIDIA 3D Vision users can experience 3-D images in actual stereoscopic 3-D.

The experience was demonstrated at the Radiological Society of North America's Scientific Assembly and Annual Meeting. Siemens' fourSight Workplace, which manages clinical images, clips and 3D/4D volume data, utilizes a Dell Precision T5500 workstation driven by an NVIDIA Quadro FX 3800 professional graphics card, a Samsung 2233RZ 22-inch, 3-D Vision-ready

LCD, and NVIDIA 3D Vision glasses to demonstrate how patients and their doctors can view remarkable, high-resolution, three-dimensional sonograms in true 3-D. For more information on supported glasses and displays, including NVIDIA 3D Vision, see www.nvidia.com/object/quadro_pro_graphics_boards.html.

3D Center Envisions Archive for Digital Shows

by Rich Dubnow and Martha McCann

For those of us lucky enough to attend NSA conventions and ISU Congresses on a regular basis, one of the highlights is always the stereo theatre. In just a few short years, we've seen the presentations evolve from slide shown on film to high definition digital productions. And we always have the same afterthought: "I wish everyone in my stereo club back home could have seen this." Well, we're proposing to make that happen, not just for the Cascade Stereoscopic Club (our local club), but for every stereo club in the world.

The Board of Directors of the 3D Center of Art and Photography in Portland has agreed to make the 3D Center a permanent digital archive for stereo shows. We recognize that only a portion of the worldwide stereo community has the opportunity to see these shows at NSA and ISU gatherings, and we intend to make them available to a much wider audience. We're also hopeful that establishing a permanent archive and digital lending library will encourage more stereographers to produce shows, since shows will have a longer life than a few presentations at the convention.

We also envision that seeing creative work will inspire other groups and individuals to make something of their own. For example, the Stereo Club of South California has several members who make 3-D videos, and at the last

NSA convention, the club presented a group project, "Doggone." Members of the Cascade Stereoscopic Club who were present at the convention were so impressed, they are now working on a show of their own for the next convention.

While exact standards are still a couple of months from being finalized, we're planning to have two formats available: a high definition, wide screen, 1080p version and a lower resolution version of the same show. There will be a list of available shows with a short synopsis and running times. All your club needs to enjoy the best stereo shows available is a computer with a dual video output card, two digital projectors that can be polarized, and a silver screen. Imagine being able to choose any

of a hundred stereo shows by simply downloading one from the 3D Center's website www.3dcenter.us. That's our vision.

One of the most popular shows ever shown at the 3D Center is "High Days and Holidays," a compilation of images from the 1920s and 30s taken by Ben Bathurst on 6X13 cm glass slides, converted to 35mm, and ultimately digitized. The show is narrated by Otto Bathurst, the photographer's grandson, who comments at the end that his grandfather would be so thrilled to know that his work was being enjoyed by stereo enthusiasts 70 years later. It's our hope to make that opportunity available to every stereographer. Watch for an update on our progress in the next issue. 📺

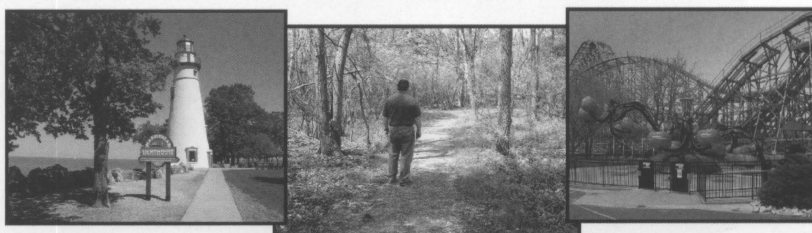
ANNOUNCING

The 36th National Stereoscopic Association Convention

July 14-19, 2010

Huron, Ohio USA

Welcome back to the Great Lakes Region!! The 2010 NSA Convention will be held at the Lodge at Sawmill Creek, located in Huron/Sandusky on Ohio's North Coast. As always, the convention will feature Stereo Theater, Workshops, Trade Fair, Exhibits, Meetings and Banquets. Sheldon Marsh and Wildlife Area borders the resort and offers trails to view and photograph flowers, wildlife, and up to 300 species of birds. Several other nature preserves are within 2 miles of the resort. Cedar Point, one of the world's best amusement parks with 17 roller coasters and dozens of other attractions, is just a 10 minute drive from Sawmill Creek. Extend your stay to experience the local wineries, museums, Amish country, the scenic Lake Erie Islands, and many other great points of interest.



This column depends on readers for information. (We don't know everything!) Please send information or questions to David Starkman, NewViews Editor, P.O. Box 2368, Culver City, CA 90231.

The Castle Stereos

Interior Views of the Smithsonian Institution

by Richard Stamm, Curator, Smithsonian Castle Collection with contributions by Paula Fleming

Part two of this series of articles on stereoviews of the Smithsonian Institution "Castle" considers views of the interior of the building. While many of these views include exhibits, a third article will cover images specifically focused on exhibitions.

In 1858, over 300 portraits of American Indians and Indian life by John Mix Stanley and Charles Bird King were displayed in the Picture Gallery of Smithsonian Building's Upper Main Hall. A marble copy of the famous statue "Dying Gaul" by English sculptor John Gott [foreground Figure 1] had been placed in the room in 1857. Exhibiting this statue along with images of American Indians was a conscious effort on the part of Joseph Henry to make a visual connection between the plight of Native Americans and the dying heroes of antiquity. In reference to the Stanley portraits, Henry said "It is a sacred duty which this country owes to the civilized world to collect... all that may tend to illustrate the character and history of the original inhabitants of

North America." In 1859 he proposed that photographs be made of the visiting Native American delegates who were brought to the capitol to negotiate treaties. Availed with the new technology of photography, after the tragic fire Henry renewed his suggestion, writing to Commissioner of Indian Affairs Lewis Boggy, that it was time "to begin anew... a far more authentic and trustworthy collection of likenesses of the principal tribes of the U.S." Further underlining his feelings he added, "The Indians are passing away so rapidly that but few years remain, within which this can be done and the loss will be irretrievable and so felt when they are gone."¹

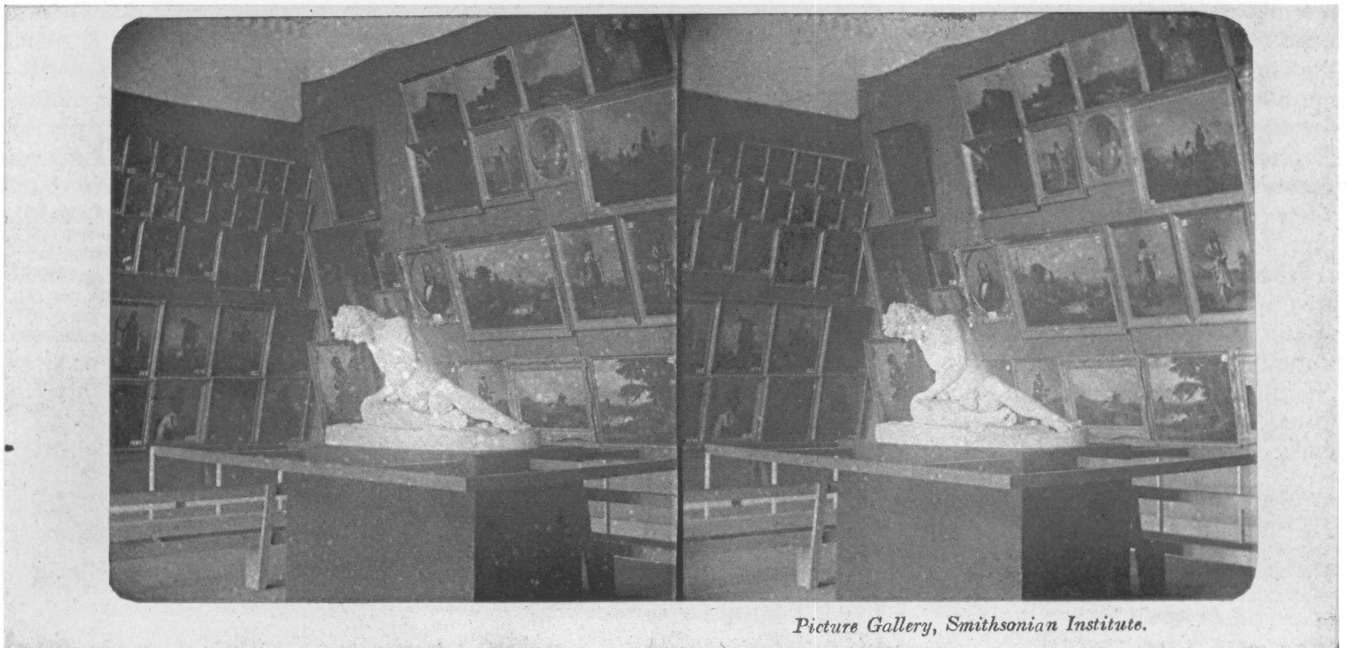
In the 1840s, John Mix Stanley joined a number of American expeditions with the specific intention of making paintings of the

American Indians. Hoping the U.S. government would purchase his work, he loaned approximately 150 of his paintings to the Smithsonian in 1852 to display while Congress considered their purchase. Stanley's dreams to make a fortune literally went up in smoke in the 1865 fire which started in this room. All but five of his paintings were destroyed. He was never compensated for his loss. All of King's paintings on exhibit were destroyed, however duplicate oils and lithographs exist for many of his works. Figure 2 shows some of the King and Stanley paintings.

Joseph Henry, the Secretary of the Smithsonian, had apartments, located on the second floor of the east wing, consisting of eight main

¹ National Archives and Records Administration: Record Group 75: Indian Affairs: Letters Received (misc.): Henry to Boggy Feb. 20, 1867

Fig. 1. "Picture Gallery, Smithsonian Institute (sic)," by Langenheim, Lloyd & Co., taken between 1857 and January 24, 1865, yellow mount. This extremely rare Langenheim & Lloyd view shows the interior of the Smithsonian Art Gallery. Stanley and King paintings hang behind John Gott's marble copy of the "Dying Gaul." Taken after the sculpture was placed in the room in 1857 and before the 1865 fire. [SI.2004.020]



Picture Gallery, Smithsonian Institute.



Picture Gallery, Smithsonian Institute.

rooms, including a music room, a parlor, a dining room, four bedrooms, and a private study. The stereograph in Figure 3 is one of a series of photographs taken by Henry's personal friend, artist Titian Ramsey Peale in the summer of 1862. Despite the fact that his living quarters were located directly above the laboratories which emitted foul odors, Henry was generally pleased with the situation stating, "we have very pleasant and commodious apartments in the Smithsonian building..."

Fig. 2. "Picture Gallery, Smithsonian Institute (sic)," by Langenheim, Lloyd & Co., late 1850s, yellow mount. This view shows the John Mix Stanley and Charles Bird King paintings of Native Americans. On the bottom row, third in from the left is Stanley's, "An Osage Scalp Dance," painted in 1845. Only five of Stanley's paintings survived the 1865 fire which started in this room; all of the King's on display were destroyed, although copy oils and lithographs exist of his work. [SI.2004.021]

Shortly after Henry's death in 1878, the apartments were again photographed, by Smithsonian photographer Thomas William Smillie [Figure 4]. Henry's bedroom furniture was composed of a mix of periods and styles. The Renaissance Revival bureau and sofa, the Rococo Revival armchair, the so-

called French bedstead, the Empire style side chairs, and two plain rocking chairs of no particular style were grouped together on a floral medallion rug. Light was supplied by two gas fixtures: a rod-type suspension chandelier with three arms and a center light, and a hinged wall bracket over the bed. The marble-topped radiator in the corner was one of several in the apartments.

Fig. 3. Large Parlor in the Henry Apartments, by Titian Ramsey Peale, ivory mount, taken in the summer of 1862. [SI.1980.092 A]



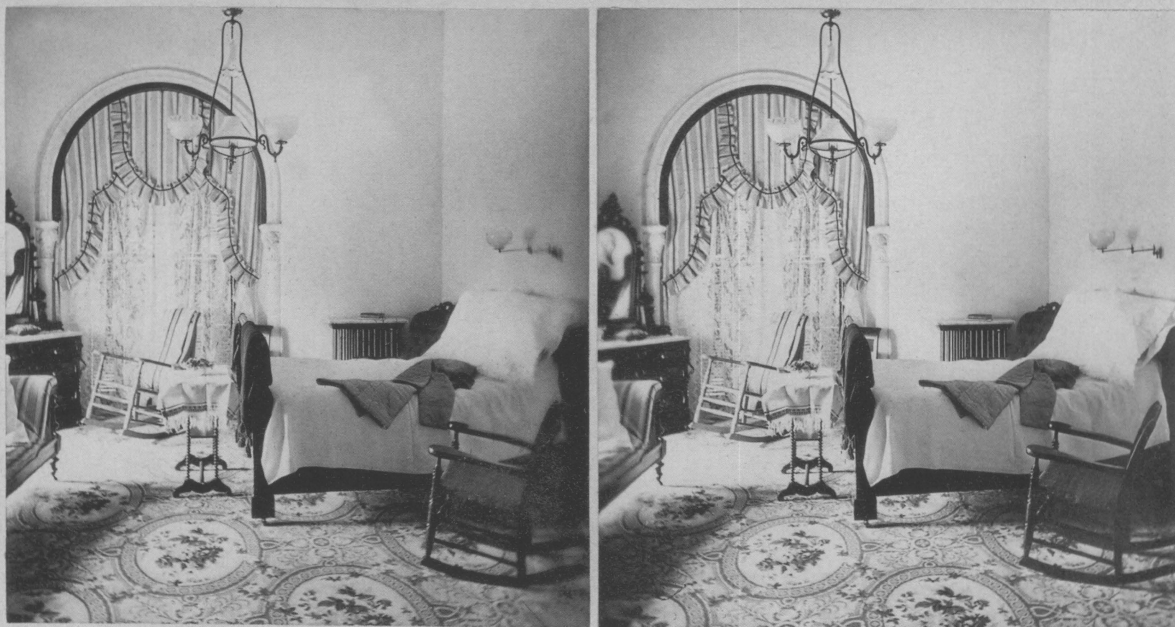


Fig. 4. Joseph Henry's Bedroom in the Henry Apartments, by Smithsonian photographer, Thomas William Smillie, 1878, yellowed grey mount. [SI.1980.092 D]

The second bedroom in the Henry suite of rooms was located in the southwest corner of the wing [Figure 5]. Although similar in many respects to Henry's bedroom, the gas chandelier in this room was from the 1850s, while

the one in Henry's bedroom dated from the 1870s. The most unusual piece of furniture in the room was the simple but elegant Thonet folding chair. This type of chair

was first introduced by Thomas Thonet's bentwood furniture factory in Vienna in 1866 which exported furniture to the United States in limited numbers during the 1860s. By 1873, however, the company had a branch in New

Fig. 5. Bedroom in the Henry Apartments, by Thomas William Smillie, 1878, yellowed grey mount. [SI.1980.092 C]

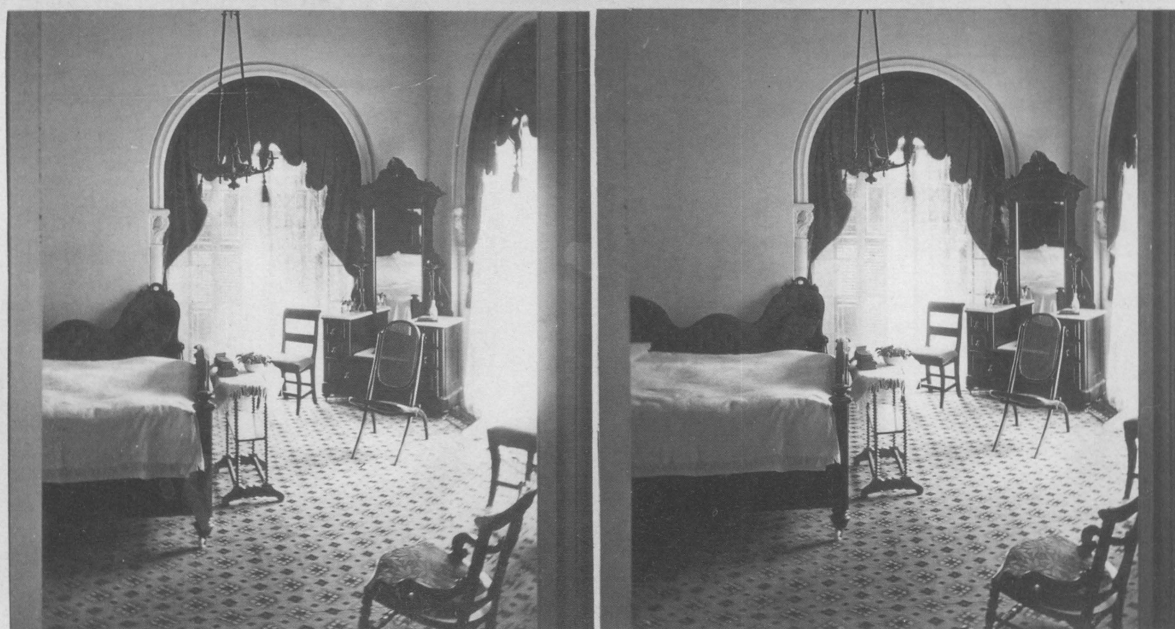




Fig. 6. Joseph Henry's Study in the Henry Apartments, by Thomas William Smillie, 1878, yellowed grey mount. [SI.1980.092 E]

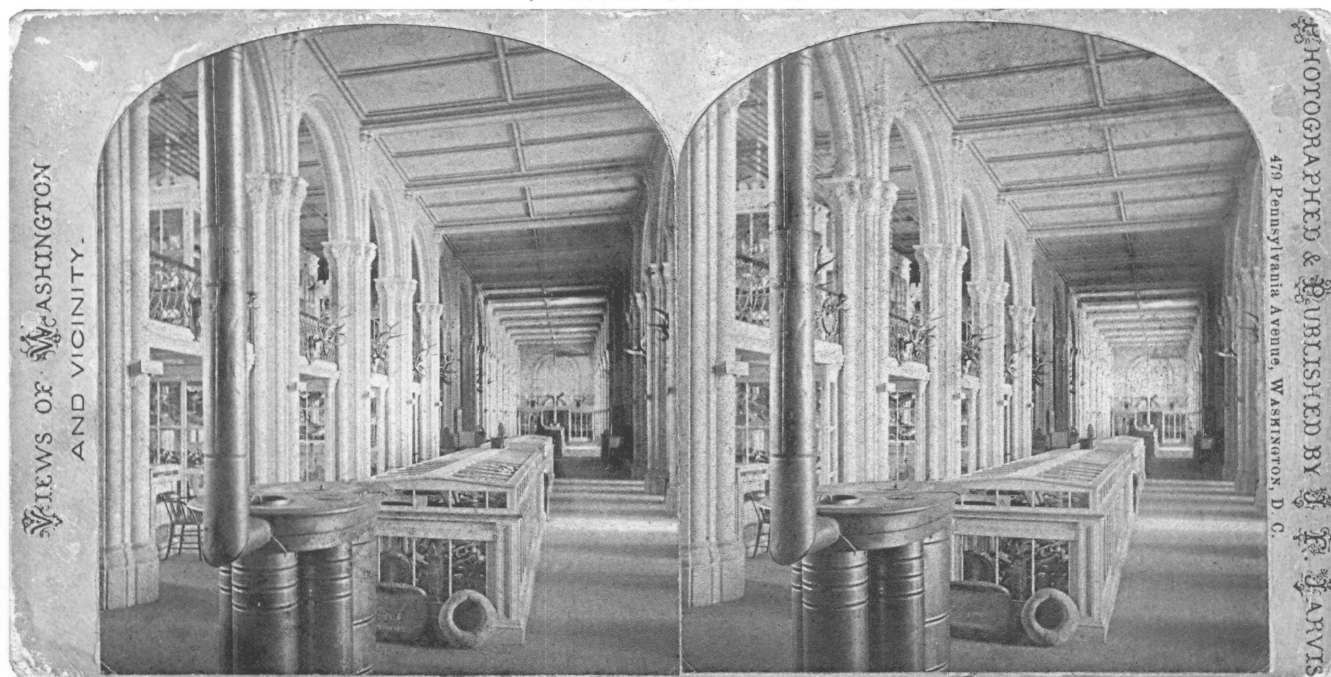
York City, and the popularity of this type of furniture spread throughout this country.

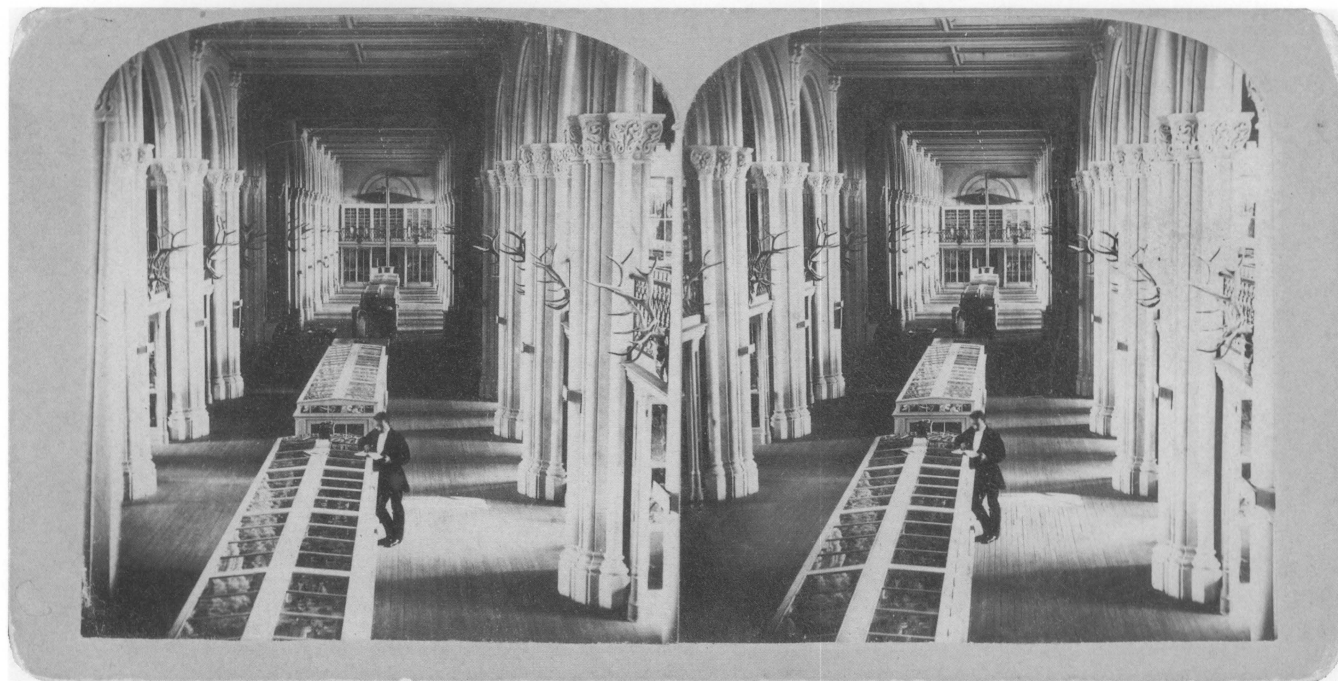
Joseph Henry's private study [Figure 6] in his apartment occupied a small room between the two bedrooms on the south side of the East Wing. Late in 1862, Henry's only son William died of jaundice in the East Wing apartments. A rather touching entry in Mary's

diary for New Year's Day 1863 read: "We watched the old year out and the new year in. Nell and I sat in Father's study until the heavy boom of a cannon told us the old year was dead. I shall not soon forget that sound; it was the last of the year that knew our Will."

The rapid increase of museum specimens acquired during the Institution's early years, necessitated an almost continual reorganization of collections. By 1867, a scant 10 years since the collections first began to arrive from the defunct National Institute the museum was full to overflowing. Figure 7 shows the Lower Main Hall in the Building looking

Fig. 7. "Museum, Smithsonian Institution," published by John F. Jarvis, late 1860s, yellow mount. [SI.2003.002]





toward the east. In this view, two large stoves are visible at each end of the cavernous hall. Ironically, they were installed within weeks after the fire which resulted from

Fig. 8. "The Corridor of the Smithsonian Institution," by Bell & Brother, copyright 1869, pink mount. The man standing may be one of the Bell family of photographers, possibly William Hamilton Bell, Jackson Wood Bell or Thomas S. Bell. Charles Milton Bell, the most famous photographer of the Bell family, does not appear to join the firm until 1870. Whoever is shown is likely to be reading a guide to the new exhibits. [SI.1992.006]

Fig. 9. "Gothic Hall, Smithsonian Institute (sic), Washington," photographer unknown, 1870-1874, grey mount. In May 1870 Antonio Zeno Shindler received permission to exhibit some of his paintings, "at their own risk" due to the recent fire, in the newly refurbished West range gallery. The photographs (in the Smithsonian collections) which he used as the source for his paintings can clearly be identified. The portrait on the far left is Yellow Hawk, a Sans Arc Dakota, who was photographed by Shindler between February 17 and April 8, 1867. Shindler made two series of paintings based on photos—the first shown here on display, was made for William Henry Blackmore, an Englishman, whose collection is now in the British Museum; and a second series which he later sold to the Smithsonian, and are now in the Museum of American Art. On March 22, 1874 Shindler asked for the return of the paintings so they could be sent to Blackmore. [SI.2001.008]

an improperly connected stove destroyed the upper levels of the building.

Figure 8 is a view of the museum hall, taken from the balcony at the western end of the hall looking east which shows a man, perusing a book, perhaps the Smithsonian guidebook. He is posed leaning on an exhibit case with specimens



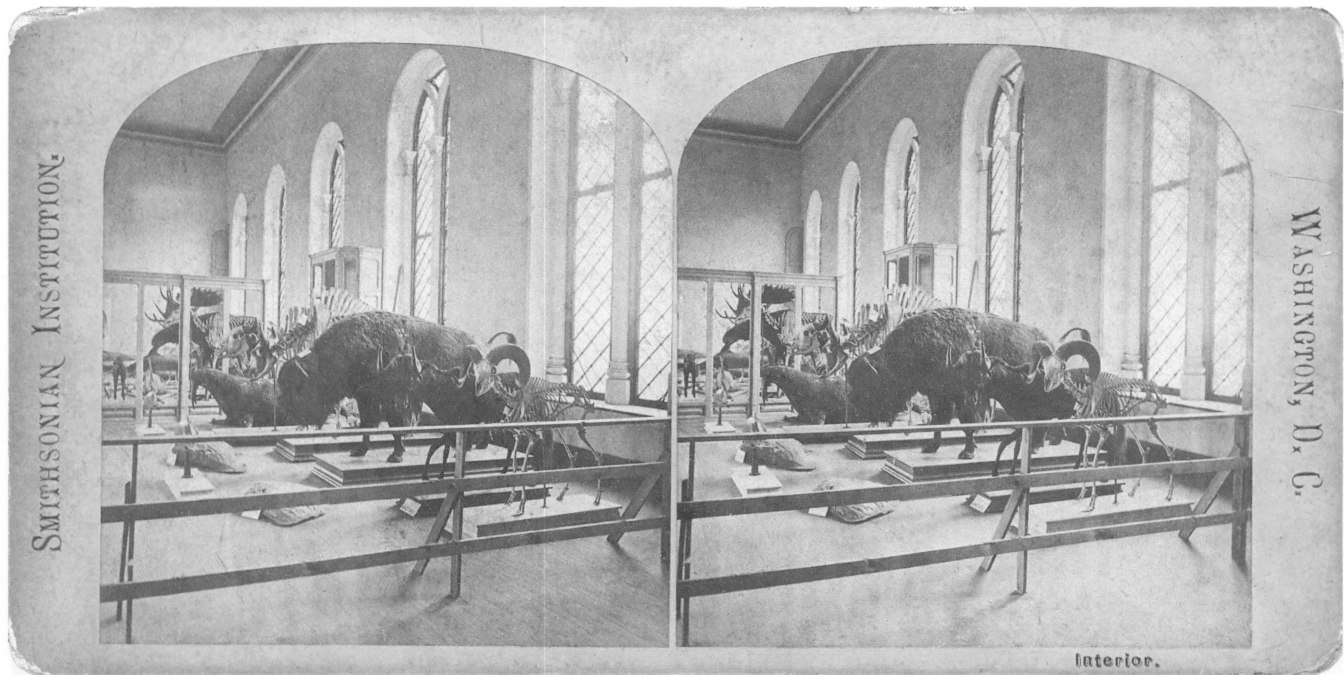


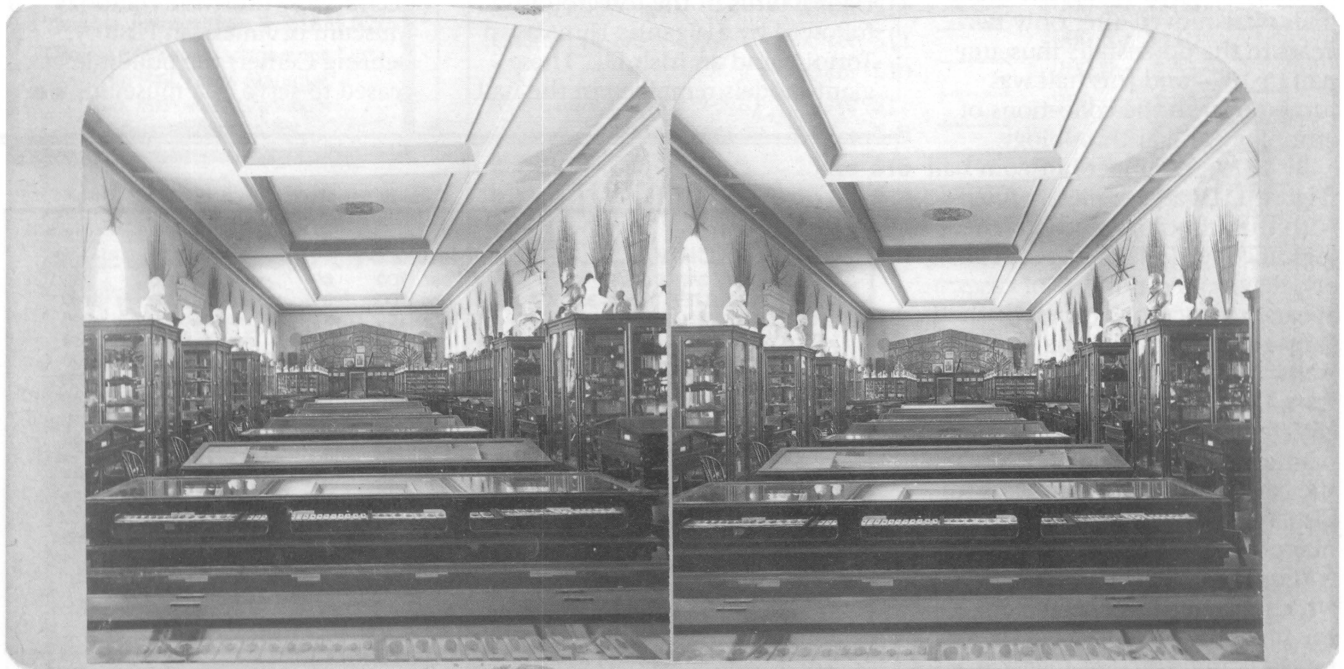
Fig. 10. Upper Main hall by anonymous photographer, before 1874 when the mammals were moved to the downstairs hall. Yellow mount. [SI.2003.004]

spread out on top. Deer horns mounted to the railings of the balcony announced to the visitor that this was a museum of natural history with specimens ranging from birds and fish at the far end of the hall to shells and turtles which were displayed in the cases in the foreground. Gas pipes which were installed on each column for sconces were instead left unused and covered with labels denoting each aisle's exhibits.

The west range adjoining the museum hall [Figure 9] held the Ethnology collections from 1868-1882. In this photograph, the exhibit cases were filled with North American Indian artifacts while objects from other cultures such as China, Japan, and prehistoric France were also exhibited in the room for comparison. Along the arcades hung portraits of

American Indian delegates who had visited Washington between 1858 and 1869. They were painted by Antonio Zeno Shindler, a photographer and artist employed by the National Museum, based on photographs he had taken or copied. Above the door leading to the Museum Hall hung the portrait of George Washington, painted by the American artist, Charles Wilson Peale. Below it was a panoramic view of Constantinople painted

Fig. 11. Museum Hall, photographer unknown, after 1876 when the Northwest Coast Indian painted house front, hanging on the far wall, was exhibited at the Philadelphia Centennial. Yellow mount. [SI.1980.092-B]



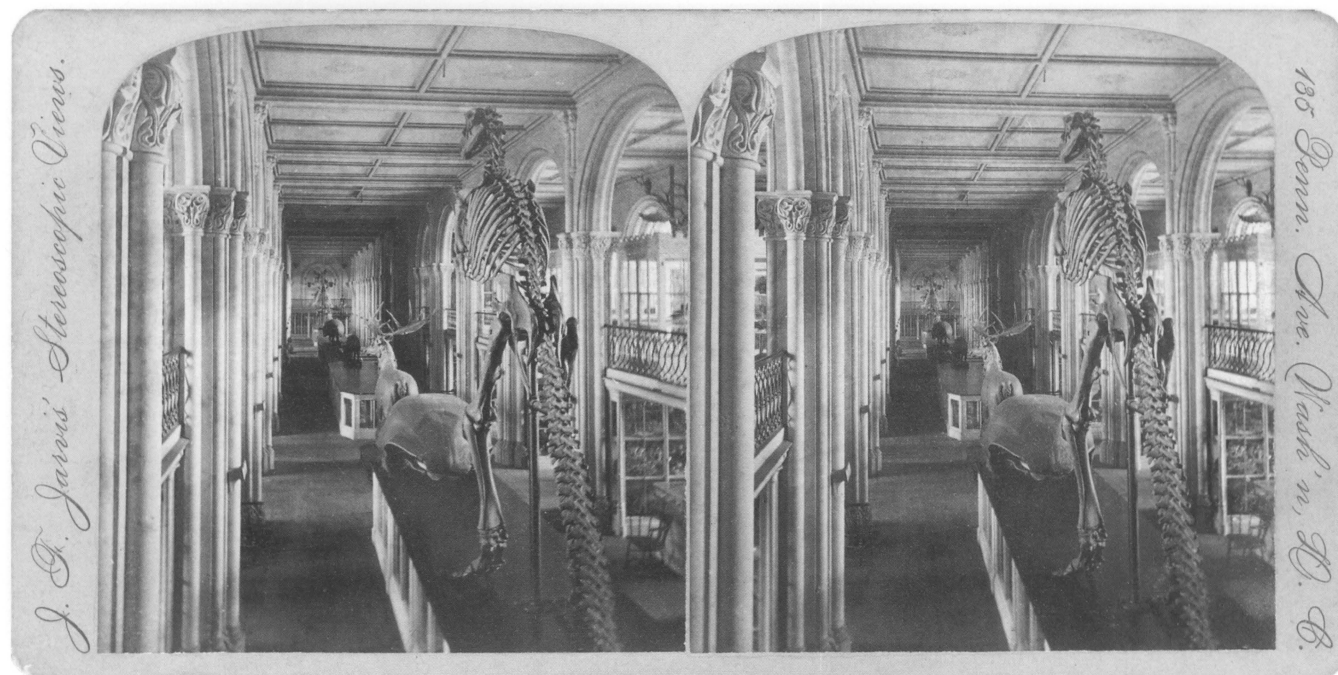


Fig. 12. "Museum, Smithsonian Institution," published by John F. Jarvis. Dated on the reverse January 17, 1882. Yellow mount. Waterhouse Hawkins' cast of *Hadrosaurus* is in the foreground, followed by a gigantic Himalayan Tortoise, an Irish Elk, and barely visible at the far end, *Megatherium*. [SI.2003.003]

by an unknown artist which measured 16 feet long. A companion stereoview, not illustrated here, shows this hall taken from the other end.

The cavernous upper main hall [Figure 10], which measured 200 feet long by 52 feet deep and 25 feet high, would eventually be filled with over 300 exhibit cases and thousands of specimens. Exhibit cases under construction are visible in this view while the mounted specimens are displayed behind a wooden railing. Reflecting changing attitudes towards museum theory and the evolution of study in other fields, the mammals were moved after only two years to the downstairs museum hall in 1874 and this hall was turned over to the collections of ethnology and anthropology.

By 1879, the upper museum hall [Figure 11] was completely filled with the ethnological and archeological collections in a great variety, height, and number of cases. Spears from various tribes, aesthetically grouped in patterns on the walls, made an effective transition from the tops of the cases to the coffered ceiling. An immense painted house front, acquired from the Northwest Coastal Indians for display at the Philadelphia Centennial of 1876, anchored the west end of the hall. The principle which guided the arrangement of the hall brought objects of like material and function together,

emphasizing their similarities, regardless of when or by whom they had been manufactured.

In order to accommodate the large specimens moved from the upper museum hall, the old slant-top cases in the lower museum hall were modified to serve as pedestals for the massive plaster models. [Figure 12] Joining *Megatherium* (barely visible at the far end of the hall) were B. Waterhouse Hawkins' cast of *Hadrosaurus* in the foreground, followed by a gigantic Himalayan Tortoise and an Irish Elk. These giant models remained in the hall

until the mid-1880s when they were moved to the new National Museum Building next door to the Castle.

The opening of the new National Museum Building in 1881 signaled the beginning of the steady reorganization of the collections in the Castle. As other museums were constructed, fewer and fewer collections remained until finally in 1964 with the opening of the National Museum of History and Technology (now the National Museum of American History, Behring Center) the building ceased to serve as a museum. 🏛️

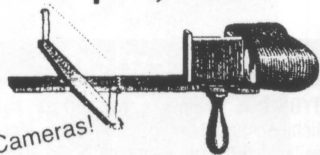
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Boston Antique Photo Show 11 April, 2010



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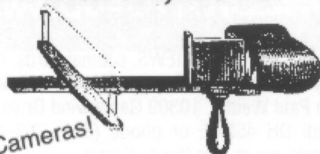
50 tables of Dags, stereos, etc.

Westford Regency Hotel Ballroom
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Public Admission 10AM \$5
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Raffle tickets may be purchased from the online store or at the 3D Center gift shop in Portland.

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INFORMATION about C.C. Curtis stereos for historical research. Charles C. Curtis worked in and around Tulare County, California, 1880s and '90s. Ken Zech, (559) 638-7216, mozbette2@comcast.net

INFORMATION about or views by stereographers J.H. Harter (Nevada, MO) and H.D. Rumsey (Homer, NY). Bart Conchar, 86 Benson Dr., Harpers Ferry WV 25425, wvconchar@frontiernet.net, (304) 876-3756.

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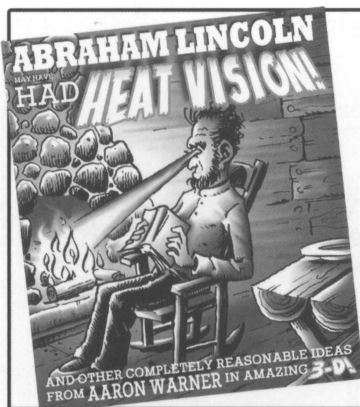
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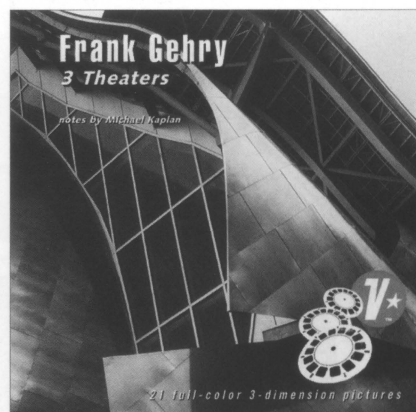
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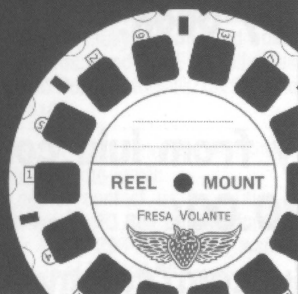
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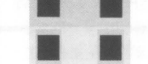


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